



## CDX CEDRI XML Reporting Instructions

Environmental Protection Agency  
Office of Air and Radiation (OAR)

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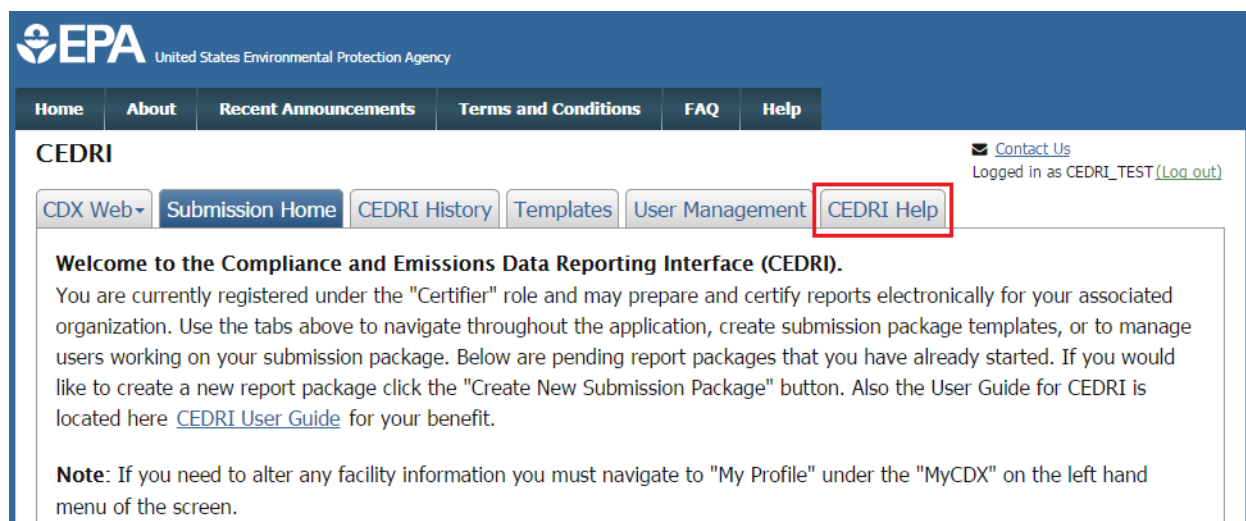
## 1 Introduction

The Compliance and Emissions Data Reporting Interface (CEDRI) is the electronic, web-based tool provided by the Environmental Protection Agency's (EPA's) Office of Air and Radiation (OAR) for the electronic submission of source test results, emissions monitoring data, compliance reports, and emissions reports to EPA. The CEDRI tool is available to users through EPA's Central Data Exchange (CDX), a web-based system used for various electronic environmental data submissions to EPA. Under EPA's "E-Reporting" rules, users wishing to submit compliance and emissions reports to EPA must register for access to the CEDRI program service through CDX. More information about CDX is available at <http://www.epa.gov/cdx/>.

### 1.1 Purpose of this Document

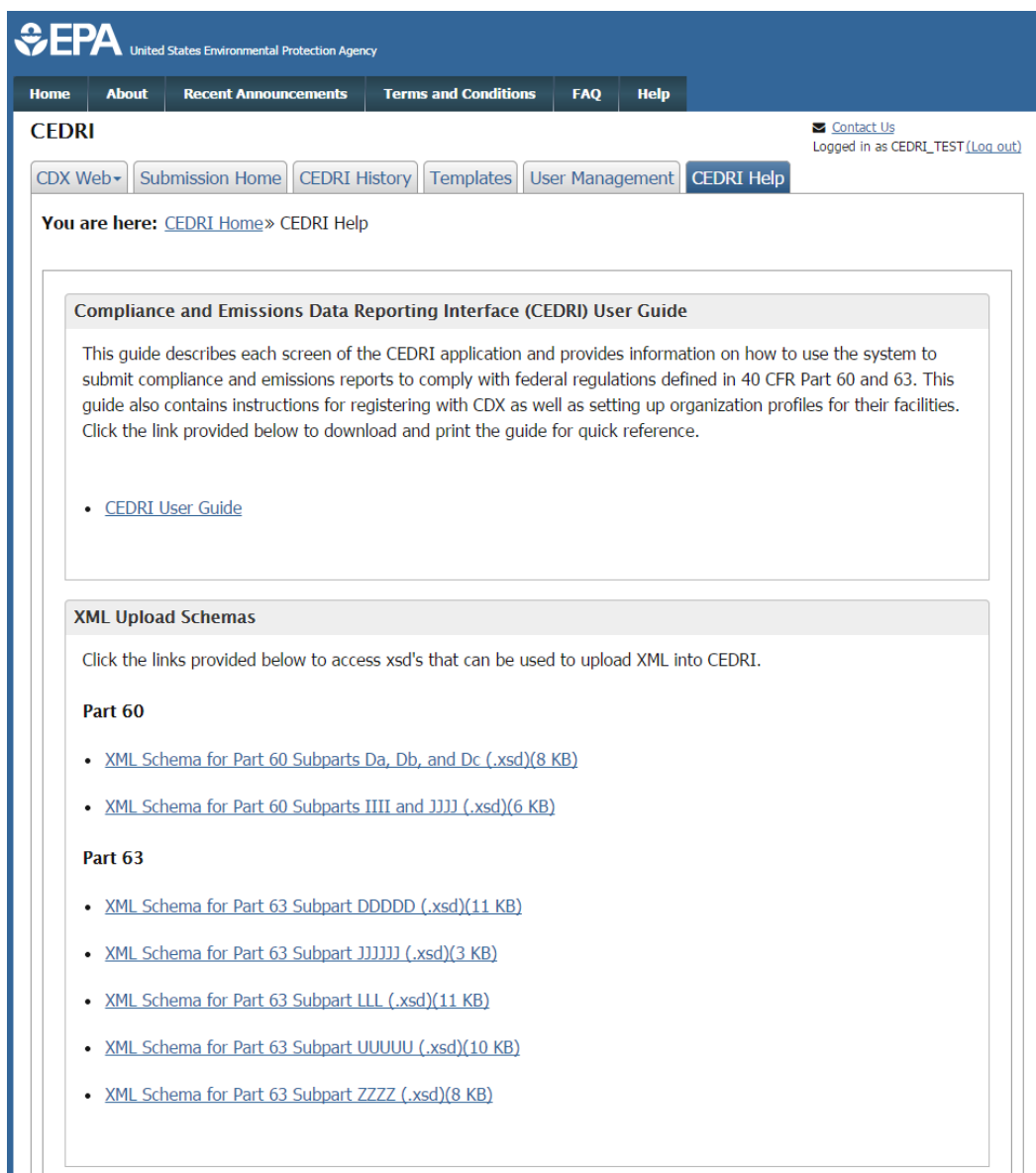
This document is designed to help users create software to automatically generate XML files that may be used to upload data in an Air Emission Report (AER) form generated by the CEDRI application. These XML files can then subsequently be uploaded into CEDRI where they will be validated against the XSD file for the particular Part – Subpart combination of the report. These XSD files can be found external to the CEDRI application at <http://epa.gov/ttn/chief/cedri/index.html>, or within the CEDRI application by clicking on the 'CEDRI Help' tab (see Exhibit 1-1).

**Exhibit 1-1 CEDRI Help Tab**



After navigating to the 'CEDRI Help' page, you can find the XML upload Schemas in the 'XML Upload Schemas' section of the page (see Exhibit 1-2).

## Exhibit 1-2 CEDRI Help Page



The screenshot shows the CEDRI Help Page on the EPA website. The header includes the EPA logo and navigation links: Home, About, Recent Announcements, Terms and Conditions, FAQ, and Help. The CEDRI section is active, showing a breadcrumb trail: You are here: [CEDRI Home](#) » CEDRI Help. The main content area is titled "Compliance and Emissions Data Reporting Interface (CEDRI) User Guide" and contains a paragraph explaining the guide's purpose. Below this, there is a link to the "CEDRI User Guide". The "XML Upload Schemas" section provides instructions on how to use XSD files to upload XML into CEDRI, listing links for Part 60 and Part 63 schemas.

**Compliance and Emissions Data Reporting Interface (CEDRI) User Guide**

This guide describes each screen of the CEDRI application and provides information on how to use the system to submit compliance and emissions reports to comply with federal regulations defined in 40 CFR Part 60 and 63. This guide also contains instructions for registering with CDX as well as setting up organization profiles for their facilities. Click the link provided below to download and print the guide for quick reference.

- [CEDRI User Guide](#)

**XML Upload Schemas**

Click the links provided below to access xsd's that can be used to upload XML into CEDRI.

**Part 60**

- [XML Schema for Part 60 Subparts Da, Db, and Dc \(.xsd\)\(8 KB\)](#)
- [XML Schema for Part 60 Subparts IIII and JJJJ \(.xsd\)\(6 KB\)](#)

**Part 63**

- [XML Schema for Part 63 Subpart DDDDD \(.xsd\)\(11 KB\)](#)
- [XML Schema for Part 63 Subpart JJJJJ \(.xsd\)\(3 KB\)](#)
- [XML Schema for Part 63 Subpart LLL \(.xsd\)\(11 KB\)](#)
- [XML Schema for Part 63 Subpart UUUUU \(.xsd\)\(10 KB\)](#)
- [XML Schema for Part 63 Subpart ZZZZ \(.xsd\)\(8 KB\)](#)

It is important to note that this document provides a comprehensive view of all of the elements for every AER form in CEDRI; not all of the elements presented in this document will be necessary for an XML file uploaded to CEDRI. In order to create valid and relevant XML files, it is advised that you use both this document, and the respective XSD file(s) for the report(s) of interest.

The information contained within an XML document that adheres to one of the CEDRI XSD files will map directly to the form fields in one of CEDRI's AER forms.

### 1.2 How to Upload XML Files in CEDRI

After generating a valid XML file using the constraints listed in this document, as well as the respective XSD file, you are ready to upload the file to CEDRI. The XML file must be contained

within a .zip archive, along with any attachments the file references. Please note that even if your file does not contain any attachments, the lone XML file must be contained within a .zip archive for submission. The steps to uploading an XML file in CEDRI are enumerated below (these steps assume you've already registered for CDX, CEDRI, and have an active Preparer, Certifier, or Delegated Certifier role. If this is not the case, please follow Sections 3.2 – 3.10 in the CEDRI User Guide as necessary to complete your registration. The CEDRI User Guide can be found at <http://epa.gov/ttn/chief/cedri/index.html>):

- 1) Log into CDX.
- 2) Enter the CEDRI Application using a Preparer, Certifier, or Delegated Certifier role.
- 3) At the 'Submission Home' page, click the 'Create New Submission Package' button (see Exhibit 1-3).

### Exhibit 1-3 Creating a New Submission Package

**CEDRI**

[Contact Us](#)  
 Logged in as CEDRI\_TEST ([Log out](#))

CDX Web ▾

Submission Home

CEDRI History

Templates

User Management

CEDRI Help

**Welcome to the Compliance and Emissions Data Reporting Interface (CEDRI).**

You are currently registered under the "Certifier" role and may prepare and certify reports electronically for your associated organization. Use the tabs above to navigate throughout the application, create submission package templates, or to manage users working on your submission package. Below are pending report packages that you have already started. If you would like to create a new report package click the "Create New Submission Package" button. Also the User Guide for CEDRI is located here [CEDRI User Guide](#) for your benefit.

**Note:** If you need to alter any facility information you must navigate to "My Profile" under the "MyCDX" on the left hand menu of the screen.

**Pending Submissions**

	Package Name	Date Created	Facility Name	Status
<input type="checkbox"/>	<a href="#">Test XML Upload</a>	2015-02-26 13:39:08.009		In Progress
<input type="checkbox"/>	<a href="#">Testing XML Uploads</a>	2015-02-26 13:33:34.91		In Progress

Create New Submission Package

Remove Selected

- 4) Fill out the necessary information for the Submission Package:
  - a) Enter a value for the 'Package Name' field, and then select a Facility and click the 'Set Facility' button (see Exhibit 1-4).

## Exhibit 1-4 Filling out Submission Package Data (1/3)

**CEDRI** [Contact Us](#)  
Logged in as CEDRI\_TEST ([Log out](#))

[CDX Web](#) [Submission Home](#) [CEDRI History](#) [Templates](#) [User Management](#) [CEDRI Help](#)

**You are here:** [CEDRI Home](#) » Submission Package

Use the fields below to manage your submission package before it is submitted electronically. Your package name and selected subparts/reports may be modified at any time prior to submittal. Refer to Section 4.3 of the CEDRI User guide located here [CEDRI User Guide](#) for more specific information regarding submission packages.

Note: The facilities in the 'Select Facility' dropdown menu are specific to your organization and role. To modify them, you must navigate to "My Profile" under the "MyCDX" on the left hand menu of the screen. Once a facility is chosen the selection is final, although you may revise facility details at any time by selecting the 'Edit Facility Details' button.

**Manage Submission Package**

Package Name

Prepare your package from a template by selecting and applying a saved template (Optional)

Select a facility from the dropdown list, \*

- b) Select the appropriate subparts from the dropdown menus and click the 'Apply Subpart(s)' button to apply your selection (see Exhibit 1-5).

## Exhibit 1-5 Filling out Submission Package Data (2/3)

Select all applicable subparts from the drop-down lists below that you wish to complete reports for.

[Help](#)

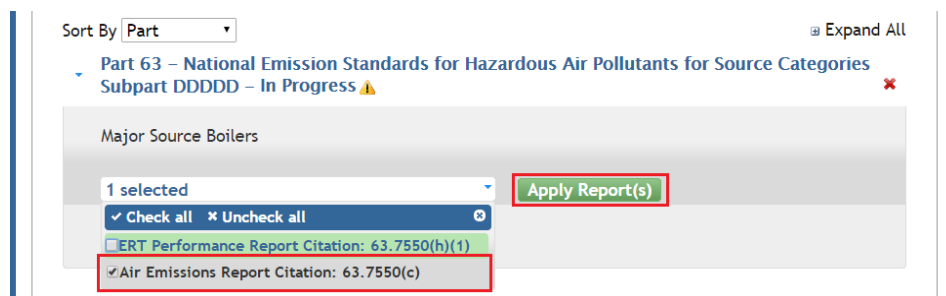
Part 60 subparts:

Part 63 subparts:

State or Other Regulation subparts:

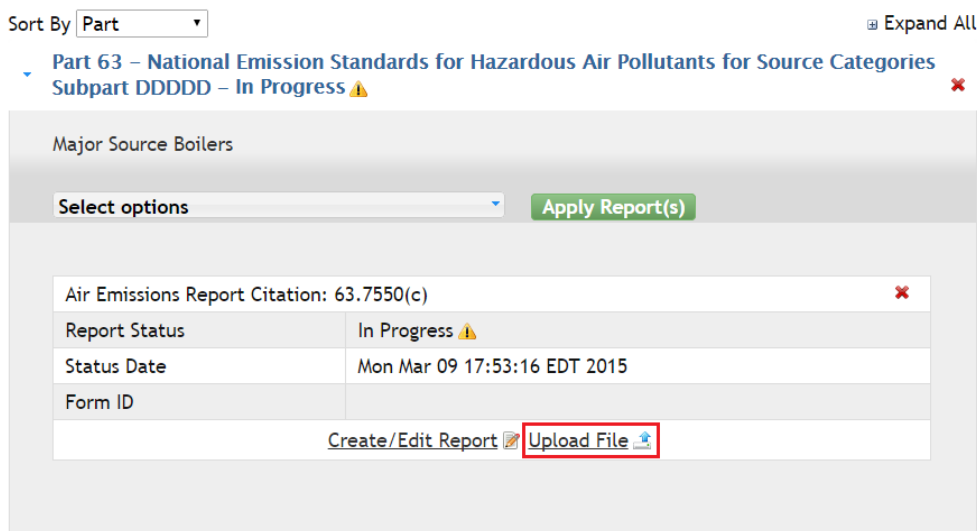
- c) Expand the accordion fold for one of the Part-Subpart combinations you selected and select the Air Emissions Report from the dropdown menu and click the 'Apply Report(s)' button (see Exhibit 1-6).

### Exhibit 1-6 Filling Out Submission Package Data (3/3)



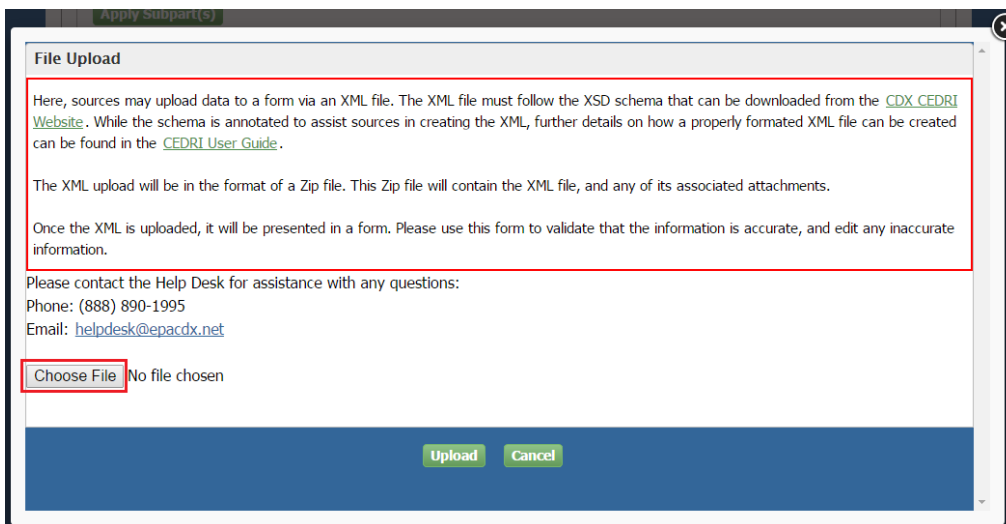
- 5) Click the 'Upload File' link (see Exhibit 1-7) to trigger the 'File Upload' dialog.

### Exhibit 1-7 Trigger File Upload Dialog



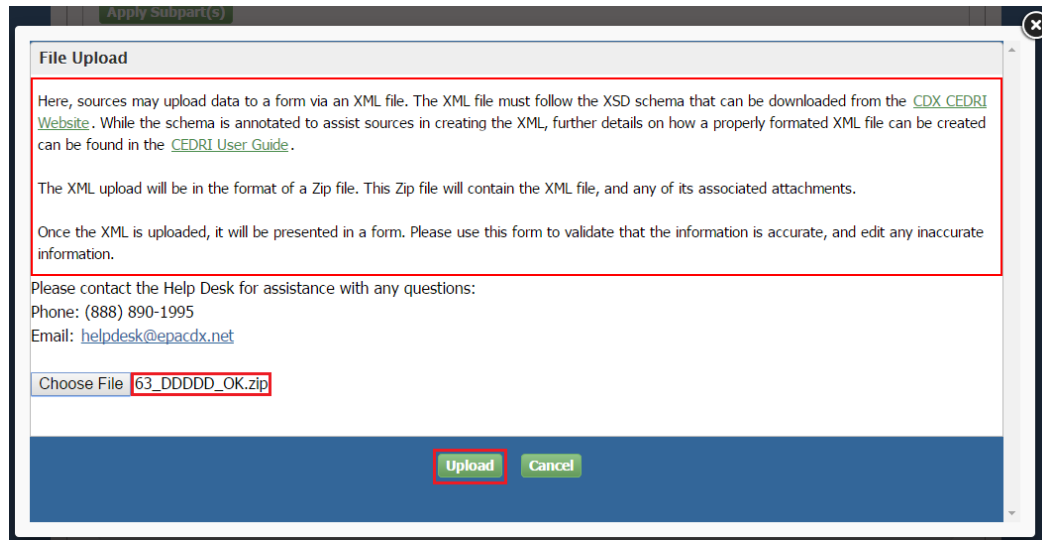
- 6) In the 'File Upload' dialog click the 'Choose File' button and select the appropriate ZIP file from your computer's file system (see Exhibit 1-8).

### Exhibit 1-8 Choose a File to Upload



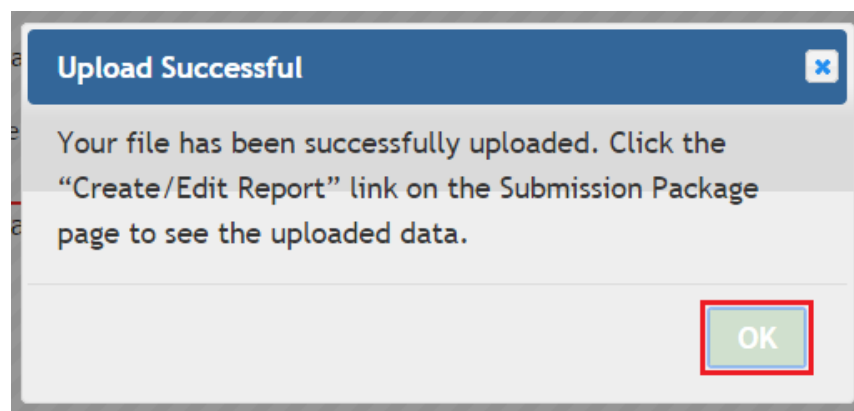
- 7) After you have picked your file, the name of the file will be shown next to the 'Choose File' button (see Exhibit 1-9). Click the 'Upload' button to upload your file, and create the form with the data from the XML. When this button is clicked, CEDRI will validate the contents of your XML file against the appropriate XSD.

**Exhibit 1-9 Uploading an XML File**



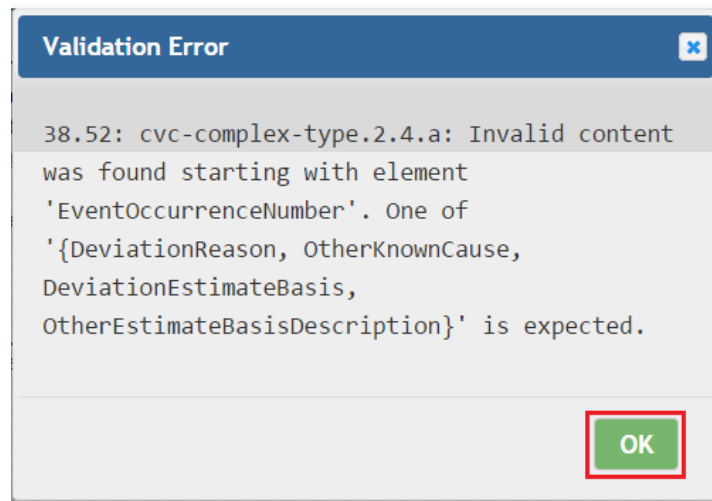
- a) If your XML passes the validation check, the 'Upload Successful' dialog box will be shown reflecting this (see Exhibit 1-10). Click the 'OK' button to continue.

**Exhibit 1-10 Upload Successful Dialog Box**



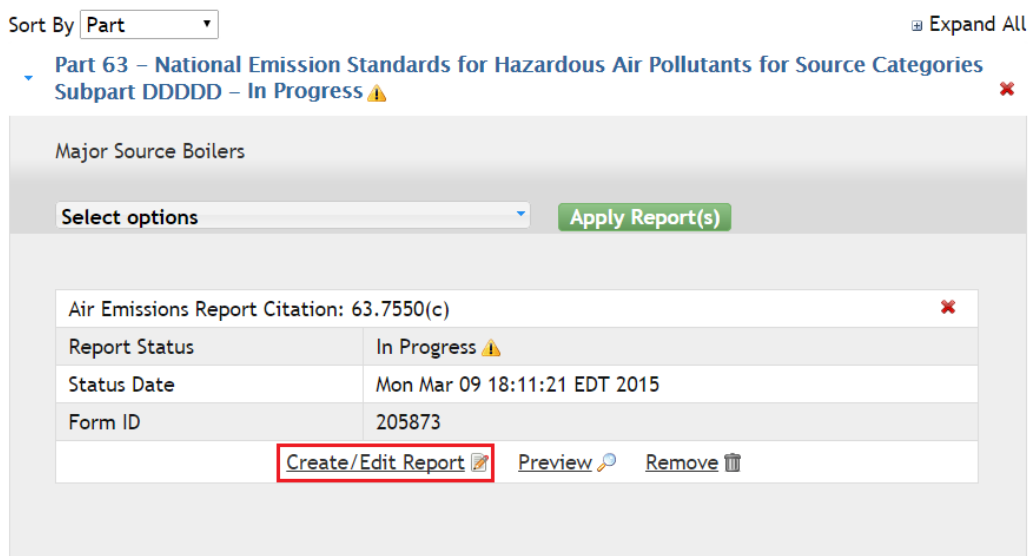
- b) If your XML fails the validation check, the 'Validation Error' dialog box will be shown reflecting this as well (see Exhibit 1-11). The dialog box will detail the errors in the uploaded XML so that you may correct the XML to agree with the applicable XSD. Click the 'OK' button to continue.

**Exhibit 1-11 Validation Error Dialog Box**



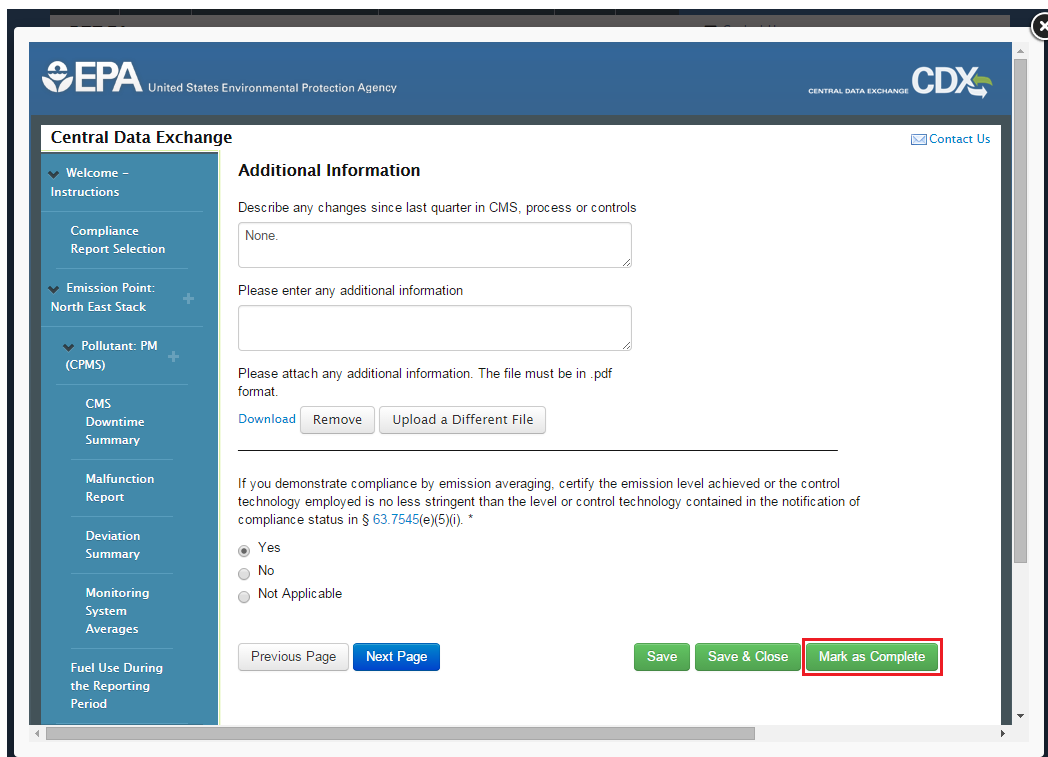
- 8) After a successful XML upload, you must open the form that is now pre-populated with the XML contents, and verify that the data is complete and correct within the form. You can do this by clicking the 'Create/Edit Report' link (see Exhibit 1-12).

**Exhibit 1-12 Create / Edit Report Link**



- 9) After verifying that all the information is complete and correct within the form, click the 'Mark as Complete' button within the form to complete this report (see Exhibit 1-13).

## Exhibit 1-13 Mark Form as Complete



**EPA** United States Environmental Protection Agency **CDX** CENTRAL DATA EXCHANGE

**Central Data Exchange** [Contact Us](#)

**Additional Information**

Describe any changes since last quarter in CMS, process or controls

None.

Please enter any additional information

Please attach any additional information. The file must be in .pdf format.

[Download](#) [Remove](#) [Upload a Different File](#)

If you demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in § 63.7545(e)(5)(i). \*

☒ Yes  
☐ No  
☐ Not Applicable

[Previous Page](#) [Next Page](#) [Save](#) [Save & Close](#) [Mark as Complete](#)

- 10) You may complete steps 5-9 for any other AERs within your submission package. Once all reports are completed, follow Section 4.4 in the CEDRI User Guide to submit your package.

## 2 Data Elements

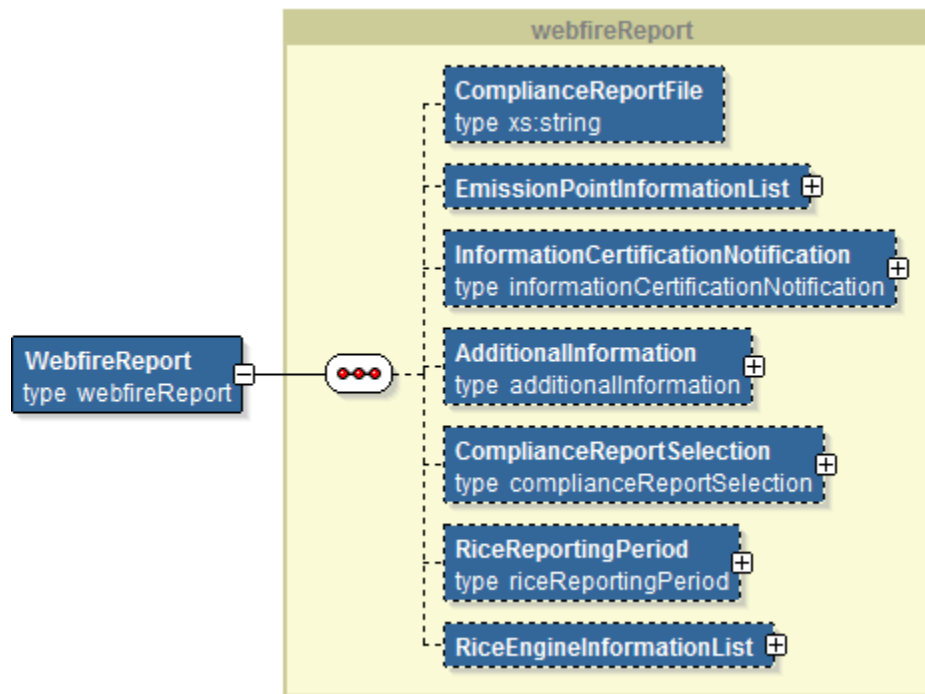
### 2.1 WebFIRE Report

#### WebFIRE Report

**Element Name:** *WebfireReport*

**Element Description:** The containing element for the entire report. Holds report metadata, as well as reporting data.

**Exhibit 2-1 WebFIRE Report XML Element**



#### Compliance Report File Upload

**Element Name:** *ComplianceReportFile*

**Element Type:** String

**Element Description:** Name of PDF file that contains applicable 63.7550(c) report(s). Multiple reports must be contained in one PDF.

#### WebFIRE Report Complex Child Elements

- Emission Point Information List
- Information Certification Information
- Additional Information
- RICE Reporting Period
- RICE Engine Information List

## 2.2 Emission Point Information List

---

### Emission Point Information List

**Element Name:** *EmissionPointInformationList*

**Element Description:** The containing element for Emission Point Information.

**Exhibit 2-2 Emission Point Information List XML Element**



### Emission Point Information List Complex Child Elements

- Emission Point Information

## 2.3 Emission Point Information

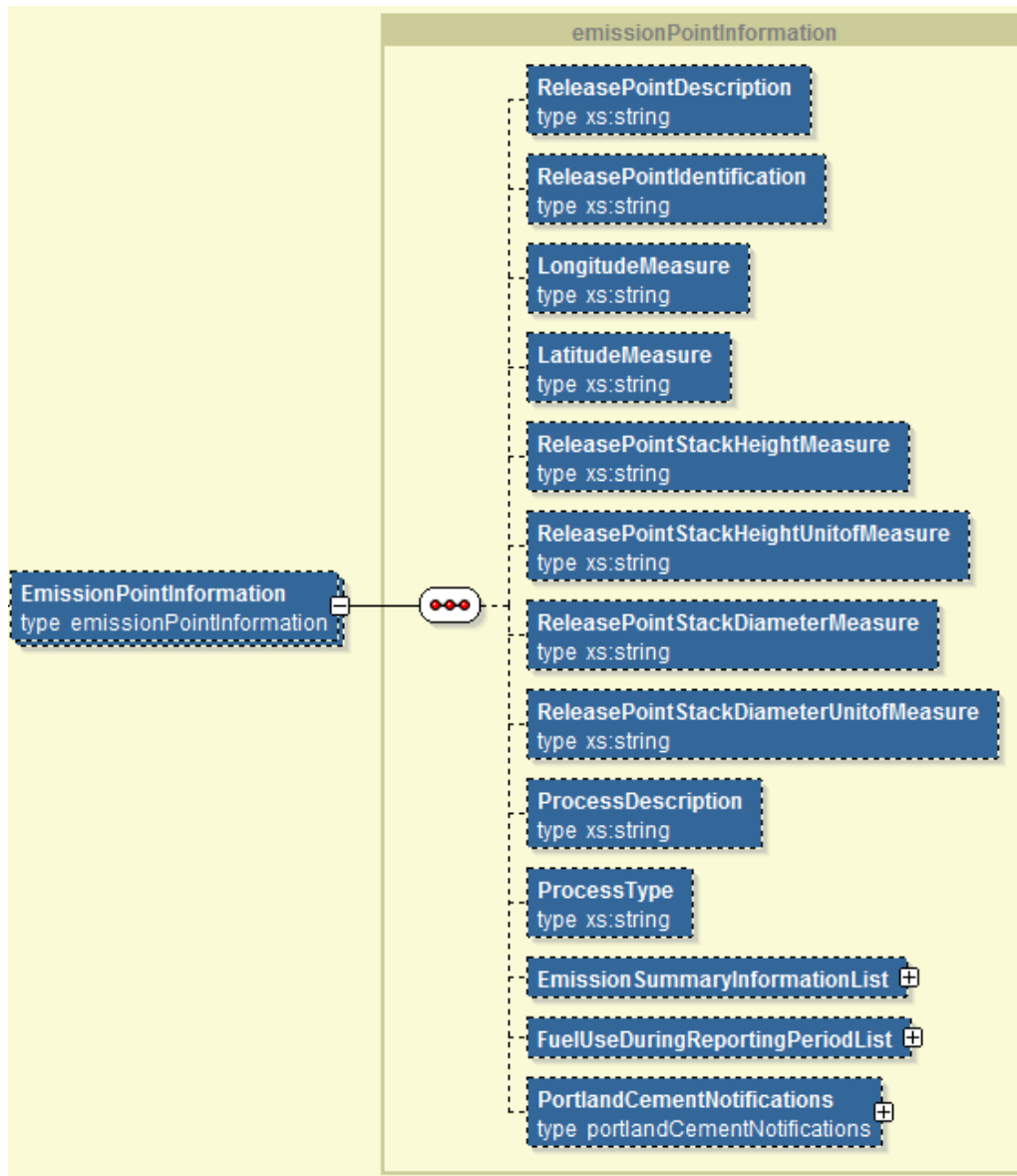
---

### Emission Point Information List

**Element Name:** *EmissionPointInformation*

**Element Description:** Containing element for information regarding the emission point.

Exhibit 2-3 Emission Point Information XML Element



### Release Point Description

**Element Name:** *ReleasePointDescription*

**Element Description:** A description of the release point (e.g. East Stack).

### Release Point Identification

**Element Name:** *ReleasePointIdentification*

**Element Description:** The State/Local agency Emission Point ID if applicable

### Longitude Measure

---

**Element Name:** *LongitudeMeasure*

**Element Description:** Longitude measure of the emission point. This value must have 5 decimal places in precision.

### **Latitude Measure**

**Element Name:** *LatitudeMeasure*

**Element Description:** Latitude measure of the emission point. This value must have 5 decimal places in precision.

### **Release Point Stack Height Measure**

**Element Name:** *ReleasePointStackHeightMeasure*

**Element Description:** The number representing the height of the stack.

### **Release Point Stack Height Unit of Measure**

**Element Name:** *ReleasePointStackHeightUnitofMeasure*

**Element Description:** The unit of measure for the stack height.

### **Release Point Stack Diameter Measure**

**Element Name:** *ReleasePointStackDiameterMeasure*

**Element Description:** The number representing the diameter of the stack.

### **Release Point Stack Diameter Unit of Measure**

**Element Name:** *ReleasePointStackDiameterUnitofMeasure*

**Element Description:** The unit of measure for the stack diameter.

### **Process Description**

**Element Name:** *ProcessDescription*

**Element Description:** A description of the process taking place at this emission point (e.g. Wood Burner).

### **Process Type**

**Element Name:** *ProcessType*

**Element Description:** The name of the manufacture of the unit.

### **Emission Point Information Complex Child Elements**

- Emission Summary Information List
- Fuel Use During Reporting Period List

- Portland Cement Notifications

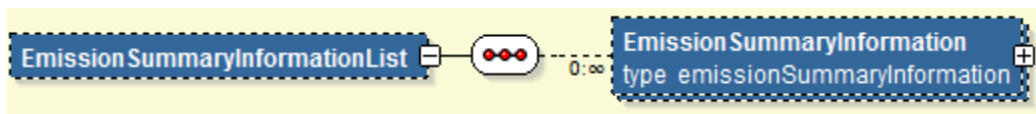
## 2.4 Emission Summary Information List

### Emission Summary Information List

**Element Name:** *EmissionSummaryInformationList*

**Element Description:** The containing element for Emission Summary Information.

**Exhibit 2-4 Emission Summary Information List XML Element**



### Emission Summary Information List Complex Child Elements

- Emission Summary Information

## 2.5 Emission Summary Information

### Emission Summary Information

**Element Name:** *EmissionSummaryInformation*

**Element Description:** The containing element for information regarding the Emissions Summary. This element is repeatable.

## Exhibit 2-5 Emission Summary Information XML Element (1/3)

<b>PollName</b> type xs:string
<b>EmissionLimit</b> type xs:string
<b>LimitUnits</b> type xs:string
<b>ParameterLimit</b> type xs:string
<b>ParameterLimitUnits</b> type xs:string
<b>Diluent</b> type xs:string
<b>DiluentUnits</b> type xs:string
<b>CompliancePeriod</b> type xs:string
<b>PeriodStartDate</b> type xs:string
<b>PeriodEndDate</b> type xs:string
<b>PeriodOperatingTime</b> type xs:string
<b>OperatingTimeUnits</b> type xs:string
<b>BoilerPeriods</b> type xs:string
<b>CompliancePeriodUnits</b> type xs:string
<b>LastTuneUpDate</b> type xs:string
<b>LastBurnerInspectionDate</b> type xs:string

## Poll Name

**Element Name:** *PollName*

**Element Description:** The name of the pollutant/parameter. The applicable pollutants for your report can be found in the respective XSD file.

## Emission Limit

**Element Name:** *EmissionLimit*

**Element Description:** The number that represents the emission limit.

## Limit Units

**Element Name:** *LimitUnits*

**Element Description:** Units for the 'Emission Limit' element. The values available in this field will be dependent upon the value selected for PollName (see Table 2-1).

**Table 2-1 Limit Unit Options**

PollName	LimitUnits Available Options
CO (630-08-0)	ppb, ppm, grains/dscf, lb/GWh, lb/MMBtu, lb/MWH, lb/Tbtu, lb/ton of product, mg/acm, mg/dscm, ug/acm, ug/dscm
Fuel Moisture*	%
H2S (7783-06-4), HCl (7647-01-0) , HF (7664-39-3), NOx (11104-93-1), TRS (18496-25-8)	ppb, ppm
HAP Metals CEMS	mg/dscm, ug/dscm, grains/dscf, lb/GWh, lb/GWh, lb/MMBtu, lb/MWH, lb/Tbtu, lb/ton of product, ug/acm, mg/ascm
Hg (CEMS) (7439-97-6)	grains/dscf, lb/GWh, lb/MMBtu, lb/MWH, lb/Tbtu, lb/ton of product, mg/ascm, mg/dscm, ug/acm, ug/dscm
Opacity, O2 (7782-44-7), Unit Operating Load	%
PM (CEMS) (1647593)	mg/dscm, ug/dscm
Scrubber Liquid Flow Rate	gal/min
Scrubber pH	n/a
Scrubber Pressure Drop	inches H2O
SO2 (7446-09-5)	ppm, ppb, % reduction
Dry Scrubber Sorbent, Carbon Injection Rate	Kg/hr, liters/hr, kg/Btu
Electrostatic Precipitator Total Secondary Electric Power Output	Volt-amps



PollName	LimitUnits Available Options
PM (CPMS), HCl (CEMS), Hg (CEMS), THC (CEMS), D/F Temperature Monitoring System, Hg Sorbent Trap Monitoring System, Carbon Injection Rate, Activated Carbon Injection Carrier Gas Flow Rate, Activated Carbon Injection Carrier Gas Pressure Drop	Temperature, Activated Carbon Injection Rate

### Parameter Limit

**Element Name:** *ParameterLimit*

**Element Description:** The number that represents the Parameter Limit. This is only applicable for pollutants: PM (CPMS), Scrubber pH, Scrubber Liquid Flow Rate, and Scrubber Pressure Drop.

### Parameter Limit Units

**Element Name:** *ParameterLimitUnits*

**Element Description:** A string representing the unit value for the 'Parameter Limit' element. This is only applicable for pollutants: PM (CPMS), Scrubber pH, Scrubber Liquid Flow Rate, and Scrubber Pressure Drop.

### Diluent

**Element Name:** *Diluent*

**Element Description:** The diluent for this pollutant, if applicable.

### Diluent Units

**Element Name:** *DiluentUnits*

**Element Description:** Unit of diluent used.

### Compliance Period

**Element Name:** *CompliancePeriod*

**Element Description:** The period of recording used during the reporting period. The values available in this field will be dependent upon the Part – Subpart combination of the regulation for which you are submitting, and the value selected for the 'PollName' element (see Table 2-2).

**Table 2-2 Compliance Period Options**

Part – Subpart	PollName	CompliancePeriod Options
60 – Da, Db, Dc	NOx (11104-93-1), TRS (18496-25-8), H2S (7783-06-4), CO (630-08-0), SO2 (7446-09-5), HCl (7647-01-0), HF (7664-39-3), Hg (CEMS) (7439-97-6), Hg (Sorbent Trap Monitoring) (7439-97-6), Fuel Moisture*	Hourly, 4 hrs Period, 6 hrs Period, 12 hrs Period, 24 hrs Period, Daily
	Opacity	Minutes, Hourly, 4 hrs Period, 6 hrs Period, 12 hrs Period, 24 hrs Period, Daily
63 - LLL	PM (CPMS), HCl (CEMS), Hg (CEMS), THC (CEMS), D/F Temperature Monitoring System, Hg Sorbent Trap Monitoring System, Carbon Injection Rate, Activated Carbon Injection Carrier Gas Flow Rate, Activated Carbon Injection Carrier Gas Pressure Drop	30 Operating Day Rolling Avg Periods
63 - DDDDD	CO (630-08-0) Hg (CEMS) (7439-97-6) PM (CPMS) PM (CEMS) (1647593) Scrubber pH Scrubber Liquid Flow Rate Scrubber Pressure Drop Dry Scrubber Sorbent Carbon Injection Rate Electrostatic Precipitator Total Secondary Electric Power Output O2 (7782-44-7) SO2 (7446-09-5)	30 Operating Day Rolling Avg Periods

Part – Subpart	PollName	CompliancePeriod Options
63 - UUUUU	Unit Operating Load	
	Opacity	Daily
	SO2 (7446-09-5), HCl (7647-01-0), HF (7664-39-3), Hg (CEMS) (7439-97-6), Hg (Sorbent Trap Monitoring) (7439-97-6), Fuel Moisture*, HAP Metals CEMS, PM (CEMS) (1647593), PM (CPMS)	Hourly, 6 hrs Period, 24 hrs Period, 30 Operating Day Rolling Avg Periods, 90 Operating Day Rolling Avg Periods
	Opacity	Minutes, Hourly

### Period Start Date

**Element Name:** *PeriodStartDate*

**Element Description:** The beginning of the reporting period (MM/DD/YYYY).

### Period End Date

**Element Name:** *PeriodEndDate*

**Element Description:** The end date of the reporting period (MM/DD/YYYY).

### Period Operating Time

**Element Name:** *PeriodOperatingTime*

**Element Description:** The number representing the amount of time this emission point has operated within the Period Start Date and Period End Date.

### Operating Time Units

**Element Name:** *OperatingTimeUnits*

**Element Description:** The unit value for the ‘Period Operating Time’ element. This field will be auto-populated, if needed, upon form creation. It is dependent on the value of the ‘PollName’ element. It does not need to be included in an XML upload. See Table 2-3 for details regarding the auto-population of the Operating Time Units field.

**Table 2-3 Operating Time Units Auto-Populated Values**

PollName	OperatingTimeUnits
CO (630-08-0),	Hours

PollName	OperatingTimeUnits
Fuel Moisture*, H2S (7783-06-4), HCl (7647-01-0) , HF (7664-39-3), NOx (11104-93-1), TRS (18496-25-8), HAP Metals CEMS, Hg (CEMS) (7439-97-6), O2 (7782-44-7), Unit Operating Load, PM (CEMS) (1647593), Scrubber Liquid Flow Rate, Scrubber pH, Scrubber Pressure Drop, SO2 (7446-09-5), Dry Scrubber Sorbent, Carbon Injection Rate, Electrostatic Precipitator Total Secondary Electric Power Output, PM (CPMS), HCl (CEMS), Hg (CEMS), THC (CEMS), D/F Temperature Monitoring System, Hg Sorbent Trap Monitoring System, Carbon Injection Rate, Activated Carbon Injection Carrier Gas Flow Rate, Activated Carbon Injection Carrier Gas Pressure Drop	
Opacity	Minutes

## Boiler Periods

**Element Name:** *BoilerPeriods*

**Element Description:** Number of Compliance Periods in the reporting period.

## CompliancePeriodUnits

**Element Name:** *CompliancePeriodUnits*

**Element Description:** Unit value for the ‘Boiler Periods’ element. This field will be auto-populated, if needed, upon form creation. It is dependent on the value of the ‘PollName’

element. It does not need to be included in an XML upload. See Table 2-4 for details regarding the auto-population of the ‘Compliance Period Units’ element.

**Table 2-4 Compliance Period Units Auto-Population Values**

CompliancePeriod	CompliancePeriodUnits
Minutes	Minutes
Hourly, 4 hrs Period, 6 hrs period, 12 hrs Period, 24 hrs Period	Hours
Daily, 30 Operating Day Rolling Avg Periods, 90 Operating Day Rolling Avg Periods	Days

### **Last Tune Up Date**

**Element Name:** *LastTuneUpDate*

**Element Description:** The date of the last tune up for a unit subject to 63.10021(e) (if applicable).

### **Last Burner Inspection Date**

**Element Name:** *LastBurnerInspectionDate*

**Element Description:** Most recent date that burner was inspected (if applicable).

## Exhibit 2-6 Emission Summary Information XML Element (2/3)

<b>MonitorManufacturer</b> type xs:string
<b>MonitorSerialNumber</b> type xs:string
<b>MonitorModelNumber</b> type xs:string
<b>LastCMSCertificationDate</b> type xs:string
<b>ExcessEmissionSummary</b> type xs:boolean
<b>CMSDowntimeSummary</b> type xs:boolean
<b>MalfunctionReport</b> type xs:boolean
<b>DeviationSummary</b> type xs:boolean
<b>FiveDCMSDowntimeSummary</b> type xs:boolean
<b>FiveDMalfunctionReport</b> type xs:boolean
<b>CMSTotalDowntime</b> type xs:string
<b>CMSPercentDowntime</b> type xs:string
<b>ExcessEmissionsTotalDuration</b> type xs:string
<b>ExcessEmissionsPercentDuration</b> type xs:string
<b>DeviationTotalDuration</b> type xs:string
<b>DeviationPercentDuration</b> type xs:string

---

**Monitor Manufacturer**

*Element Name:* MonitorManufacturer

*Element Description:* Manufacture for the monitoring device used for the applicable pollutant.

**Monitor Serial Number**

*Element Name:* MonitorSerialNumber

*Element Description:* The serial number for the monitoring device used for the applicable pollutant.

**Monitor Model Number**

*Element Name:* MonitorModelNumber

*Element Description:* The model number for the monitoring device used for the applicable pollutant.

**Last CMS Certification Date**

*Element Name:* LastCMSCertificationDate

*Element Description:* The date of the last CMS Certification for the applicable pollutant.

**Excess Emission Summary**

*Element Name:* ExcessEmissionSummary

*Element Description:* Whether or not there was an occurrence of Excess Emissions to justify an Excess Emissions Report.

**CMS Downtime Summary**

*Element Name:* CMSDowntimeSummary

*Element Description:* Whether or not there was a presence of any instances to justify a CMS Performance Summary

**Malfunction Report**

*Element Name:* MalfunctionReport

*Element Description:* Whether or not there were any process malfunctions during the reporting period to justify a Malfunction Report.

**Deviation Summary**

*Element Name:* DeviationSummary

*Element Description:* Whether or not there was an occurrence of a deviation from the emissions or operating limit to justify a Deviation Summary.

### **Five D CMS Downtime Summary**

**Element Name:** *FiveDCMSDowntimeSummary*

**Element Description:** Whether or not there was an occurrence of a deviation from continuous monitoring to justify a CMS Performance Summary.

### **Five D Malfunction Report**

**Element Name:** *FiveDMalfunctionReport*

**Element Description:** Whether or not there were any boiler, process heater, associate air pollutant control device, or CMS malfunctions during the reporting period to justify a Malfunction Report.

### **CMS Total Downtime**

**Element Name:** *CMSTotalDowntime*

**Element Description:** This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

### **CMS Percent Downtime**

**Element Name:** *CMSPercentDowntime*

**Element Description:** This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

### **Excess Emissions Total Duration**

**Element Name:** *ExcessEmissionsTotalDuration*

**Element Description:** This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

### **Excess Emissions Percent Duration**

**Element Name:** *ExcessEmissionsPercentDuration*

**Element Description:** This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

### **Deviation Total Duration**

**Element Name:** *DeviationTotalDuration*

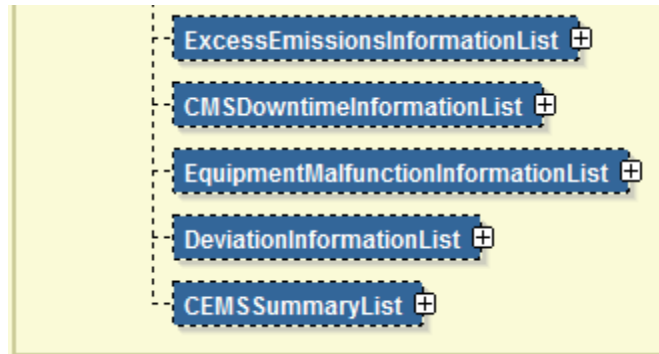
**Element Description:** This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

### **Deviation Percent Duration**

**Element Name:** *DeviationPercentDuration*

**Element Description:** This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

**Exhibit 2-7 Emission Summary Information XML Element (3/3)**



### Emission Summary Information Complex Child Elements

- Excess Emission Information List
- CMS Downtime Information List
- Equipment Malfunction Information List
- Deviation Information List
- CEMS Summary List

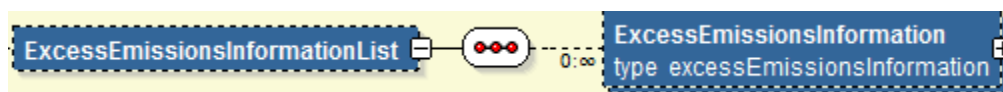
## 2.6 Excess Emissions Information List

### Excess Emission Information List

**Element Name:** *ExcessEmissionInformationList*

**Element Description:** The containing element for Excess Emission Information.

**Exhibit 2-8 Excess Emission Information List XML Element**



### Excess Emissions Information List Complex Child Elements

- Excess Emissions Information

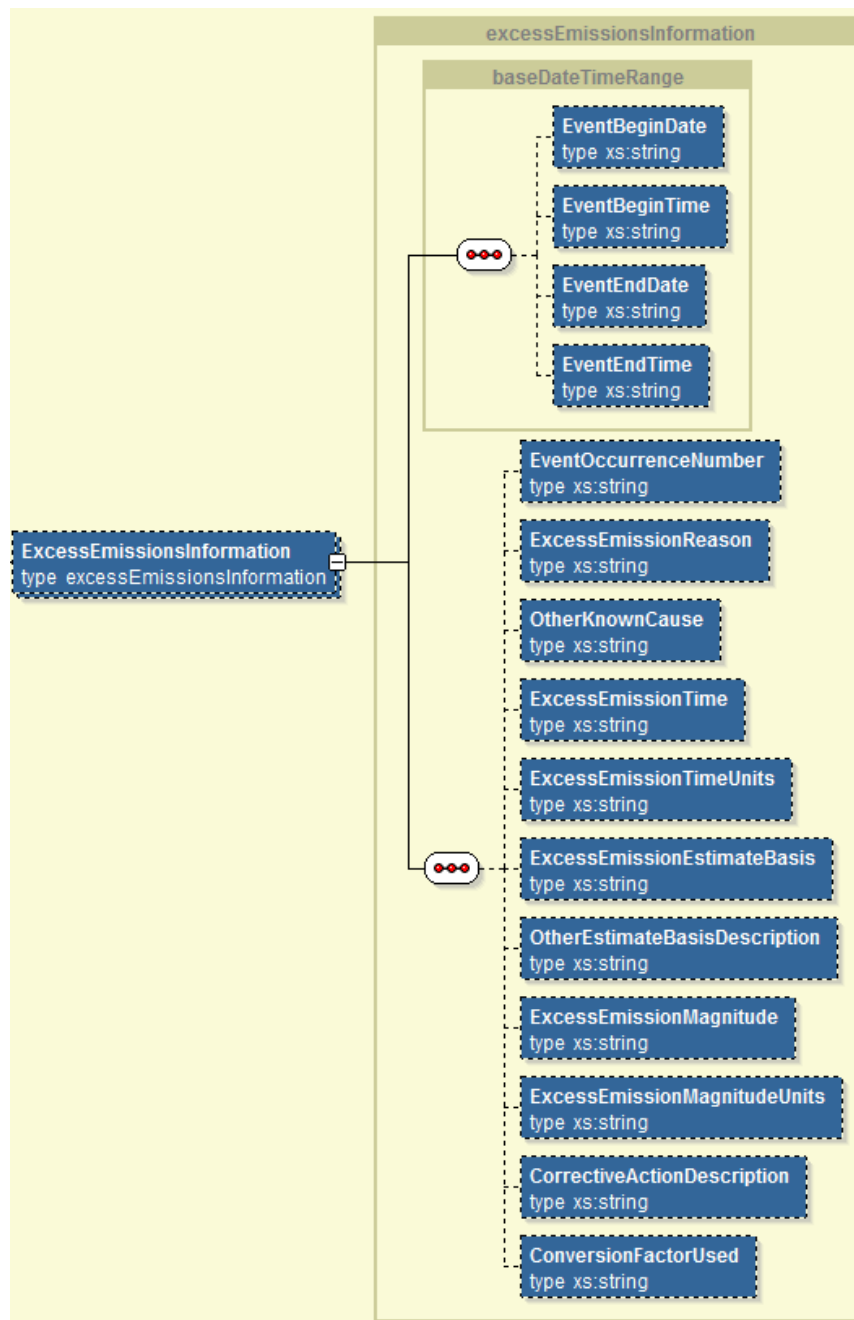
## 2.7 Excess Emissions Information

### Excess Emissions Information

**Element Name:** *ExcessEmissionInformation*

**Element Description:** The containing element for information about Excess Emissions. This element is repeatable.

**Exhibit 2-9 Excess Emissions Information XML Element**



**Event Begin Date**

*Element Name:* EventBeginDate

*Element Description:* Start date of applicable excess emission event.

**Event Begin Time**

*Element Name:* EventBeginTime

*Element Description:* Start time of applicable excess emission event.

**Event End Date**

*Element Name:* EventEndDate

*Element Description:* End date of applicable excess emission event.

**Event End Time**

*Element Name:* EventEndTime

*Element Description:* End time of applicable excess emission event.

**Event Occurrence Number**

*Element Name:* EventOccurrenceNumber

*Element Description:* This field will be auto-populated upon form creation. It does not need to be included in an XML upload.

**Excess Emission Reason**

*Element Name:* ExcessEmissionReason

*Element Description:* Reason why the applicable excess emission event occurred.

**Other Known Cause**

*Element Name:* OtherKnownCause

*Element Description:* If 'Other known causes' was selected for the 'Excess Emission Reason' element, then this field is required to describe what the known cause for excess emissions was.

**Excess Emission Time**

*Element Name:* ExcessEmissionTime

*Element Description:* The total time elapsed in this occurrence of excess emissions. This field will be auto-populated, if the Excess Emission Time Units field has a value of 'Hours' (see Table 2-5 for a list of possible values), upon form creation. It does not need to be included in an XML upload.

## Excess Emission Time Units

**Element Name:** *ExcessEmissionTimeUnits*

**Element Description:** This field will be auto-populated with the same value as Compliance Period Units, if needed, upon form creation. It does not need to be included in an XML upload. See Table 2-5 for a mapping from the ‘Compliance Period Units’ element to the ‘Excess Emission Time Units’ element.

**Table 2-5 Excess Emission Time Units Auto-Population Values**

CompliancePeriodUnits	ExcessEmissionTimeUnits
Minutes	Minutes
Hours	Hours
Days	Days

## Excess Emission Estimate Basis

**Element Name:** *ExcessEmissionEstimateBasis*

**Element Description:** Method used to estimate excess emissions.

## Other Estimate Basis Description

**Element Name:** *OtherEstimateBasisDescription*

**Element Description:** If ‘Other’ was selected for the ‘Excess Emission Estimate Basis’ element, this field is required and should describe the method used to estimate excess emissions.

## Excess Emission Magnitude

**Element Name:** *ExcessEmissionMagnitude*

**Element Description:** The value that the measured emissions exceeded the applicable limit

## Excess Emission Magnitude Units

**Element Name:** *ExcessEmissionMagnitudeUnits*

**Element Description:** Units that describe the ‘Excess Emission Magnitude’ element. This field’s options are the same as those for the ‘Limit Units’ element, and follow the same rules as shown in Table 2-1.

## Corrective Action Description

**Element Name:** *CorrectiveActionDescription*

**Element Description:** A description of the corrective action taken to reduce this instance of excess emissions.

## Conversion Factor Used

**Element Name:** *ConversionFactorUsed*

**Element Description:** The factor used to adjust between different units of measure.

## 2.8 CMS Downtime Information List

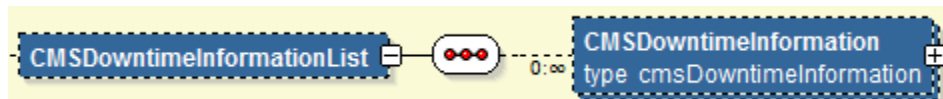
---

### CMS Downtime Information List

**Element Name:** *CMSDowntimeInformationList*

**Element Description:** The containing element for CMS Downtime Information.

**Exhibit 2-10 CMS Downtime Information List XML Element**



### CMS Downtime Information List Complex Child Elements

- CMS Downtime Information

## 2.9 CMS Downtime Information

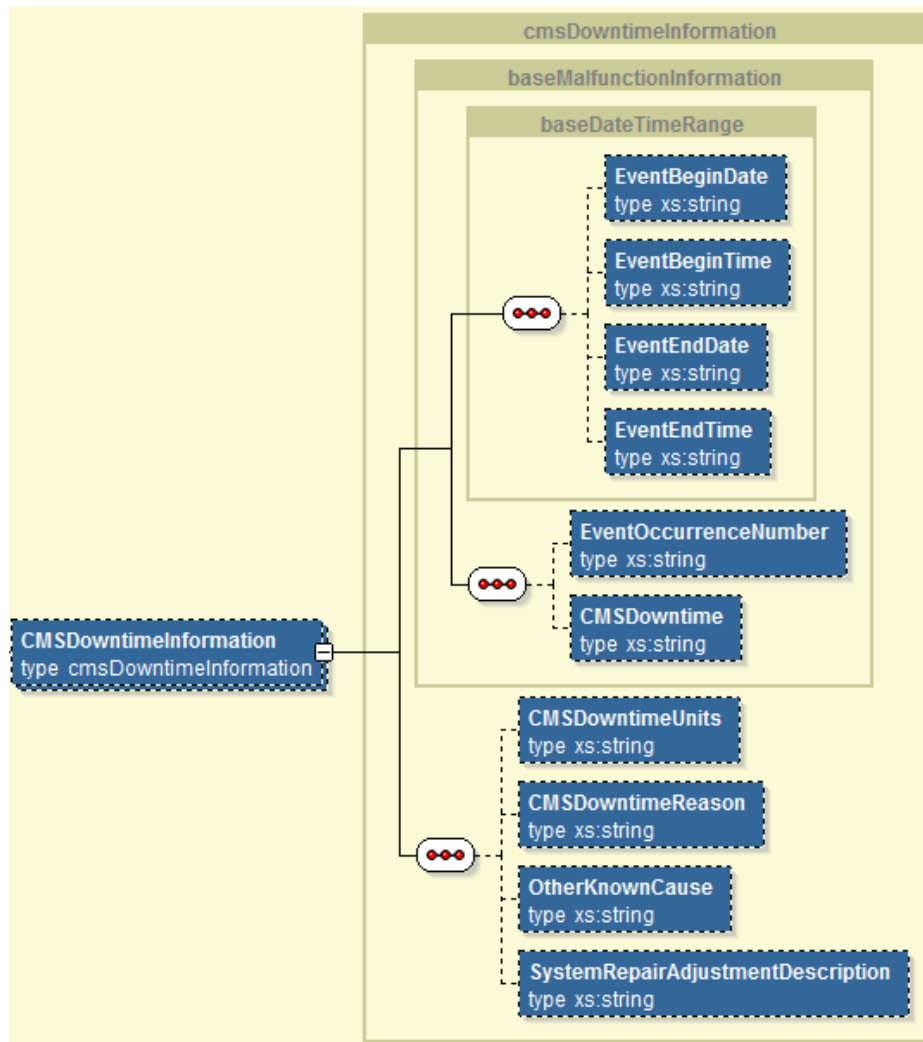
---

### CMS Downtime Information

**Element Name:** *CMSDowntimeInformation*

**Element Description:** The containing element for information about CMS Downtime. This element is repeatable.

**Exhibit 2-11 CMS Downtime Information XML Element**



### Event Begin Date

**Element Name:** *EventBeginDate*

**Element Description:** Start date of applicable CMS downtime event.

### Event Begin Time

**Element Name:** *EventBeginTime*

**Element Description:** Start time of applicable CMS downtime event.

### Event End Date

**Element Name:** *EventEndDate*

**Element Description:** End date of applicable CMS downtime event.

### **Event End Time**

**Element Name:** *EventEndTime*

**Element Description:** End time of applicable CMS downtime event.

### **Event Occurrence Number**

**Element Name:** *EventOccurrenceNumber*

**Element Description:** This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

### **CMS Downtime**

**Element Name:** *CMSDowntime*

**Element Description:** The total time elapsed in this occurrence of CMS downtime. This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

### **CMS Downtime Units**

**Element Name:** *CMSDowntimeUnits*

**Element Description:** The unit value of for the ‘CMS Downtime’ element. This field will be auto-populated with the value ‘Hours’, if needed, upon form creation. It does not need to be included in an XML upload.

### **CMS Downtime Reason**

**Element Name:** *CMSDowntimeReason*

**Element Description:** Reason why applicable CMS downtime event occurred.

### **Other Known Cause**

**Element Name:** *OtherKnownCause*

**Element Description:** Required if ‘Other known causes’ was selected for ‘CMS Downtime Reason’ element.

### **System Repair Adjustment Description**

**Element Name:** *SystemRepairAdjustmentDescription*

**Element Description:** A description of repairs or adjustments done to the system to rectify this CMS downtime event.

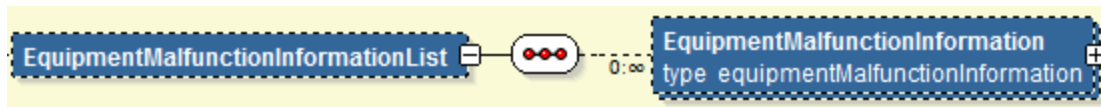
## 2.10 Equipment Malfunction Information List

### Equipment Malfunction Information List

**Element Name:** *EquipmentMalfunctionInformationList*

**Element Description:** The containing element for Equipment Malfunction Information

**Exhibit 2-12 Equipment Malfunction Information List XML Element**



### Equipment Malfunction Information List Complex Child Elements

- Equipment Malfunction Information

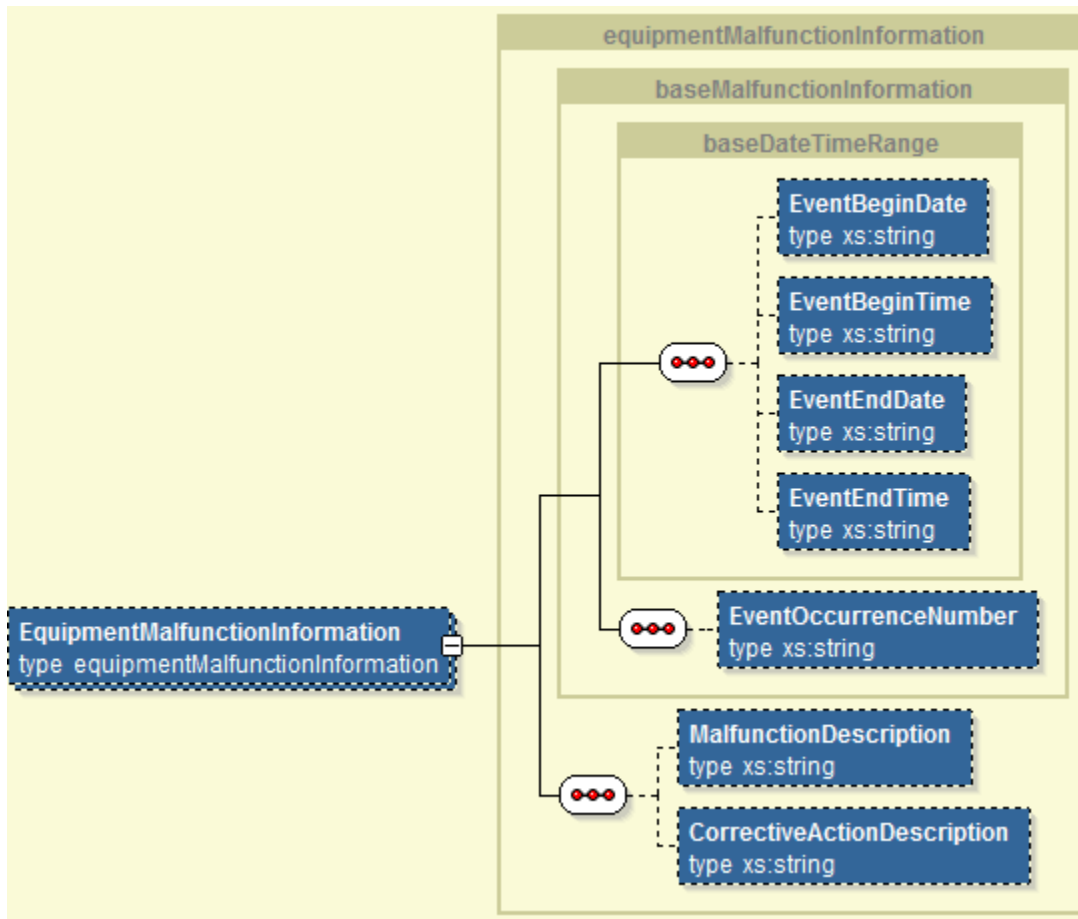
## 2.11 Equipment Malfunction Information

### Equipment Malfunction Information

**Element Name:** *EquipmentMalfunctionInformation*

**Element Description:** The containing element for information about an equipment malfunction. This element is repeatable.

## Exhibit 2-13 Equipment Malfunction Information XML Element



### Event Begin Date

**Element Name:** *EventBeginDate*

**Element Description:** Start date of applicable equipment malfunction event.

### Event Begin Time

**Element Name:** *EventBeginTime*

**Element Description:** Start time of applicable equipment malfunction event.

### Event End Date

**Element Name:** *EventEndDate*

**Element Description:** End date of applicable equipment malfunction event.

### Event End Time

**Element Name:** *EventEndTime*

**Element Description:** End time of applicable equipment malfunction event.

### Event Occurrence Number

**Element Name:** *EventOccurenceNumber*

**Element Description:** This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

### Malfunction Description

**Element Name:** *MalfunctionDescription*

**Element Description:** Details of applicable equipment malfunction event.

### Corrective Action Description

**Element Name:** *CorrectiveActionDescription*

**Element Description:** Description of the corrective action taken for this malfunction.

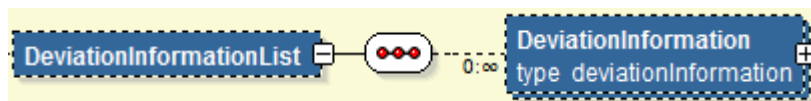
## 2.12 Deviation Information List

### Deviation Information List

**Element Name:** *DeviationInformationList*

**Element Description:** The containing element for Deviation Information.

**Exhibit 2-14 Deviation Information List XML Element**



### Deviation Information List Complex Child Elements

- Deviation Information

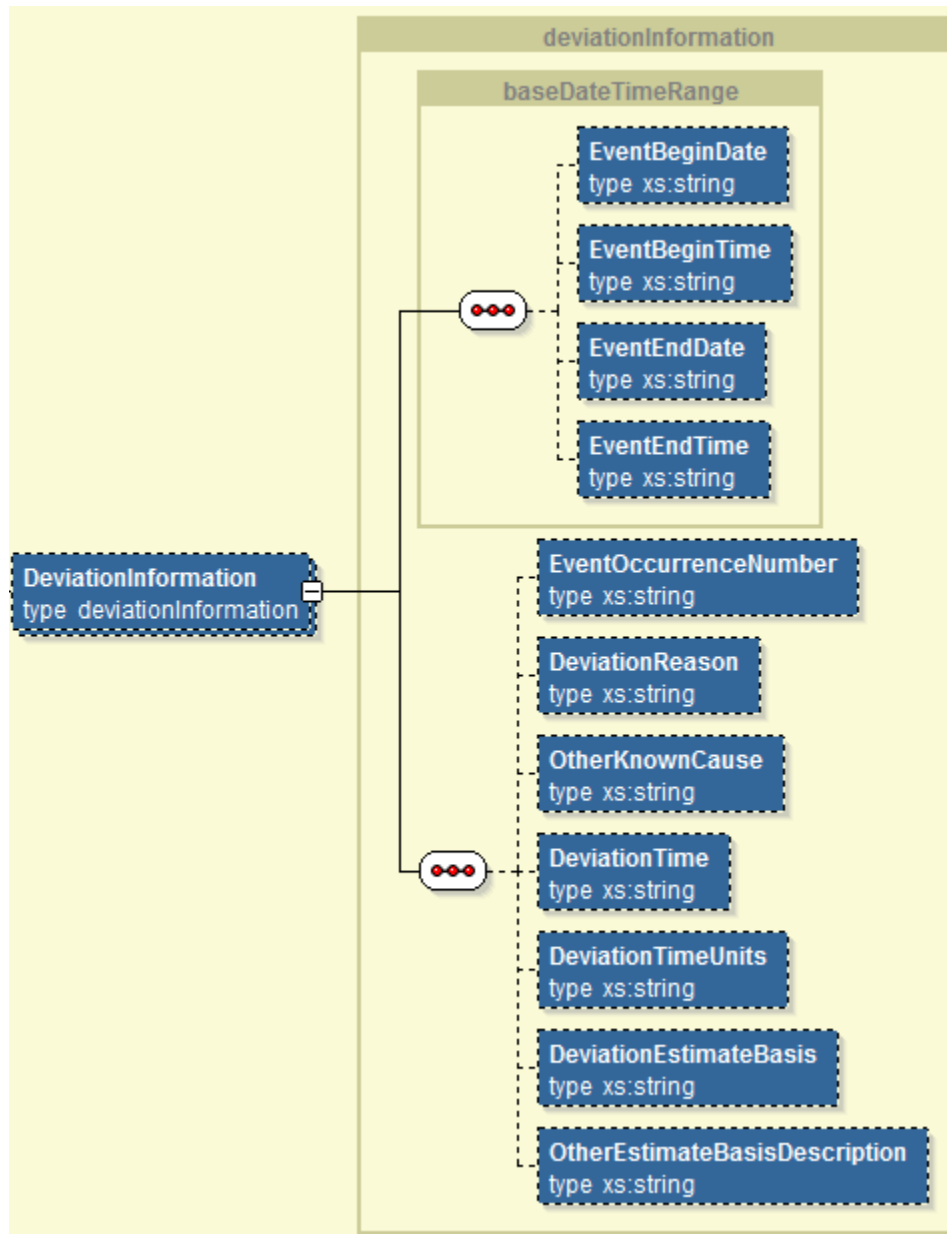
## 2.13 Deviation Information

### Deviation Information

**Element Name:** *DeviationInformation*

**Element Description:** The containing element for information about deviations from the emissions or operating limit. This element is repeatable.

**Exhibit 2-15 Deviation Information XML Element**



### Event Begin Date

**Element Name:** *EventBeginDate*

**Element Description:** Start date of applicable deviation event.

### Event Begin Time

**Element Name:** *EventBeginTime*

**Element Description:** Start time of applicable deviation event.

**Event End Date**

*Element Name:* EventEndDate

*Element Description:* End date of applicable deviation event.

**Event End Time**

*Element Name:* EventEndTime

*Element Description:* End time of applicable deviation event.

**Event Occurrence Number**

*Element Name:* EventOccurrenceNumber

*Element Description:* This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

**Deviation Reason**

*Element Name:* DeviationReason

*Element Description:* The reason for deviation from the emissions or operating limit.

**Other Known Cause**

*Element Name:* OtherKnownCause

*Element Description:* If 'Other known causes' was selected for the 'Deviation Reason' element, then this field is required to describe what the known cause for the deviation was.

**Deviation Time**

*Element Name:* DeviationTime

*Element Description:* This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

**Deviation Time Units**

*Element Name:* DeviationTimeUnits

*Element Description:* This field will be auto-populated with the value 'days', if needed, upon form creation. It does not need to be included in an XML upload.

**Deviation Estimate Basis**

*Element Name:* DeviationEstimateBasis

*Element Description:* The means by which an estimate of the deviation was made.

## Other Estimate Basis Description

**Element Name:** *OtherEstimateBasisDescription*

**Element Description:** If 'Other' was selected for the 'Deviation Estimate Basis' element, then this field is required to describe the basis of estimate for the deviation.

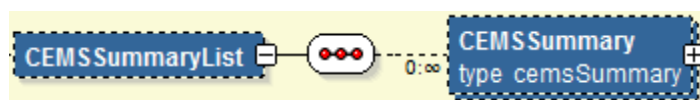
## 2.14 CEMS Summary List

### CEMS Summary List

**Element Name:** *CEMSSummaryList*

**Element Description:** The containing element for CEMS Summary information.

**Exhibit 2-16 CEMS Summary List XML Element**



### CEMS Summary List Complex Child Elements

- CEMS Summary

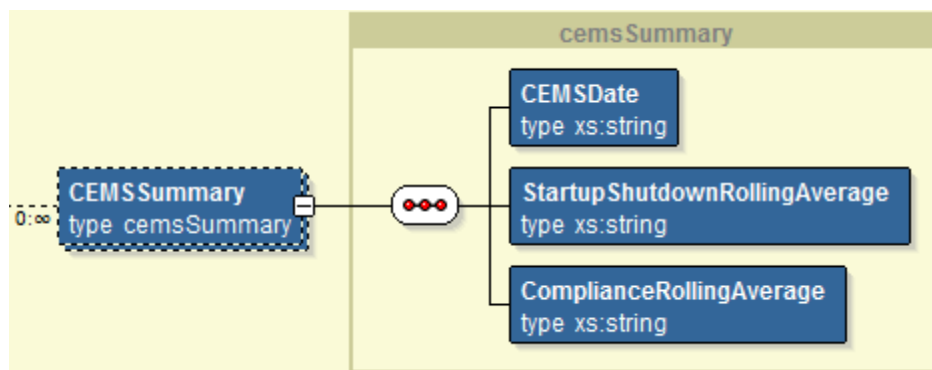
## 2.15 CEMS Summary

### CEMS Summary

**Element Name:** *CEMSSummary*

**Element Description:** The containing element for information about monitoring system averages. This element is repeatable.

**Exhibit 2-17 CEMS Summary XML Element**



### CEMS Date

**Element Name:** *CEMSDate*

**Element Description:** Date of monitoring system measurement.

### Startup Shutdown Rolling Average

**Element Name:** *StartupShutdownRollingAverage*

**Element Description:** The Startup / Shutdown Rolling average for the applicable Emission Monitoring System.

### Compliance Rolling Average

**Element Name:** *ComplianceRollingAverage*

**Element Description:** The compliance Rolling Average for the applicable Emission Monitoring System.

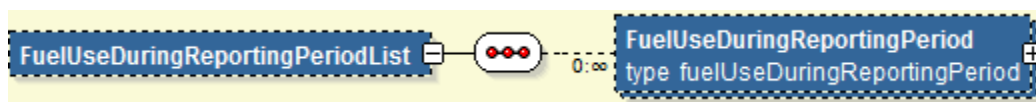
## 2.16 Fuel Use During Reporting Period List

### Fuel Use During Report Period List

**Element Name:** *FuelUseDuringReportingPeriodList*

**Element Description:** The containing element for Fuel Use During Reporting Period.

**Exhibit 2-18 Fuel Use During Reporting Period List XML Element**



### Fuel Use During Report Period List Complex Child Elements

- Fuel Use During Report Period

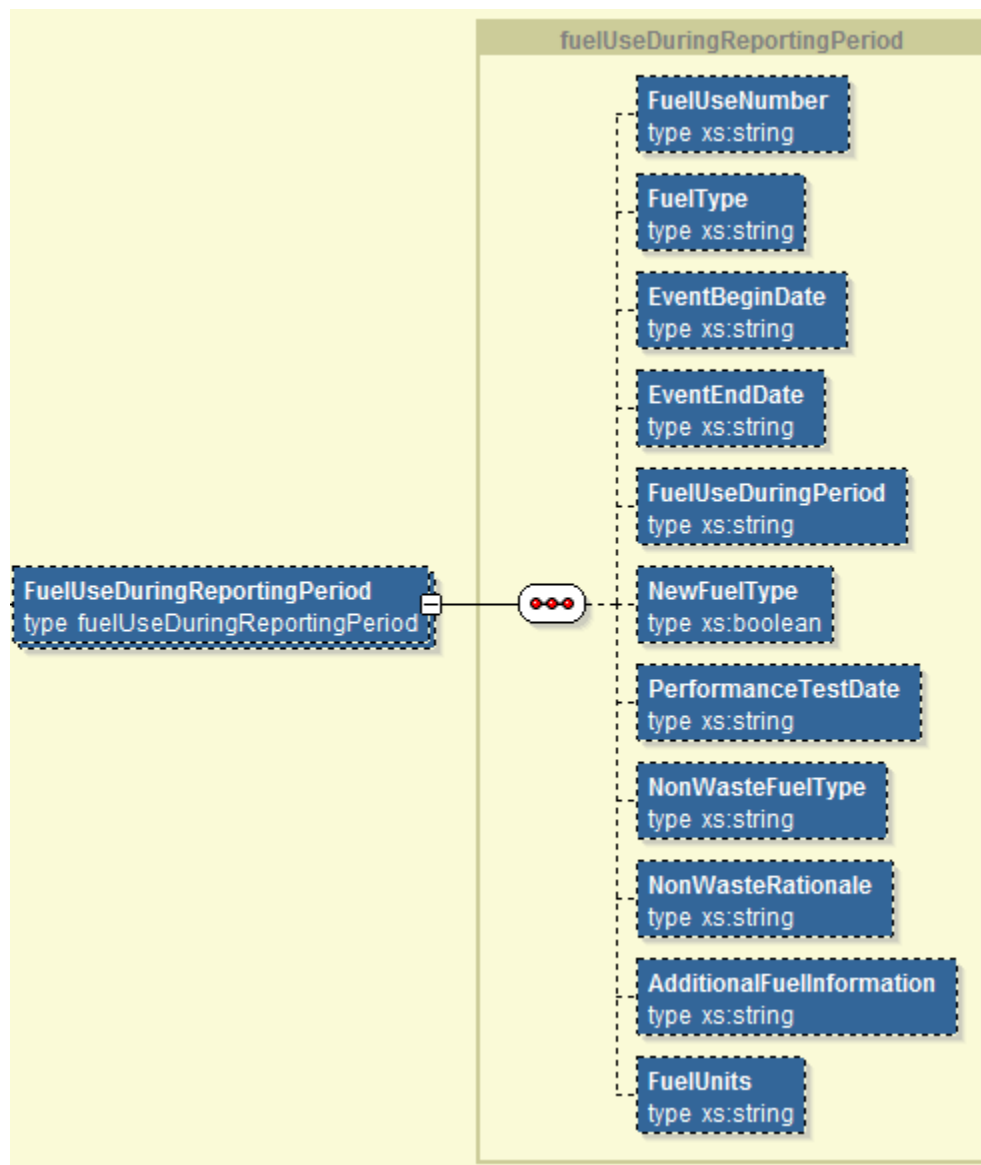
## 2.17 Fuel Use During Reporting Period

### Fuel Use During Report Period

**Element Name:** *FuelUseDuringReportingPeriod*

**Element Description:** The containing element for information on Fuel User During the Reporting Period. This element is repeatable.

Exhibit 2-19 Fuel Use During Reporting Period XML Element



## Fuel Use Number

**Element Name:** *FuelUseNumber*

**Element Description:** This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

## Fuel Type

**Element Name:** *FuelType*

**Element Description:** Type of fuel used during reporting period.

**Event Begin Date**

*Element Name:* *EventBeginDate*

*Element Description:* Start date of applicable fuel use.

**Event End Date**

*Element Name:* *EventEndDate*

*Element Description:* End date of applicable fuel use.

**Fuel Use During Period**

*Element Name:* *FuelUseDuringPeriod*

*Element Description:* The amount of fuel used during this instance.

**Fuel Units**

*Element Name:* *FuelUnits*

*Element Description:* The units for the amount of fuel used in this instance.

**New Fuel Type**

*Element Name:* *NewFuelType*

*Element Description:* Whether or not the fuel is a new type.

**Performance Test Date**

*Element Name:* *PerformanceTestDate*

*Element Description:* Date of performance test when this fuel was in use.

**Non Waste Fuel Type**

*Element Name:* *NonWasteFuelType*

*Element Description:* Type of non-waste fuel, or if the fuel is not non-waste fuel.

**Non Waste Rationale**

*Element Name:* *NonWasteRationale*

*Element Description:* If 'Non EPA determined non-waste' is selected for the 'Non Waste Fuel Type' element, this field is required to describe the basis for concluding the fuel is a non-waste fuel.

**Additional Fuel Information**

*Element Name:* *AdditionalFuelInformation*

**Element Description:** Any additional information about the fuel that you would like to report.

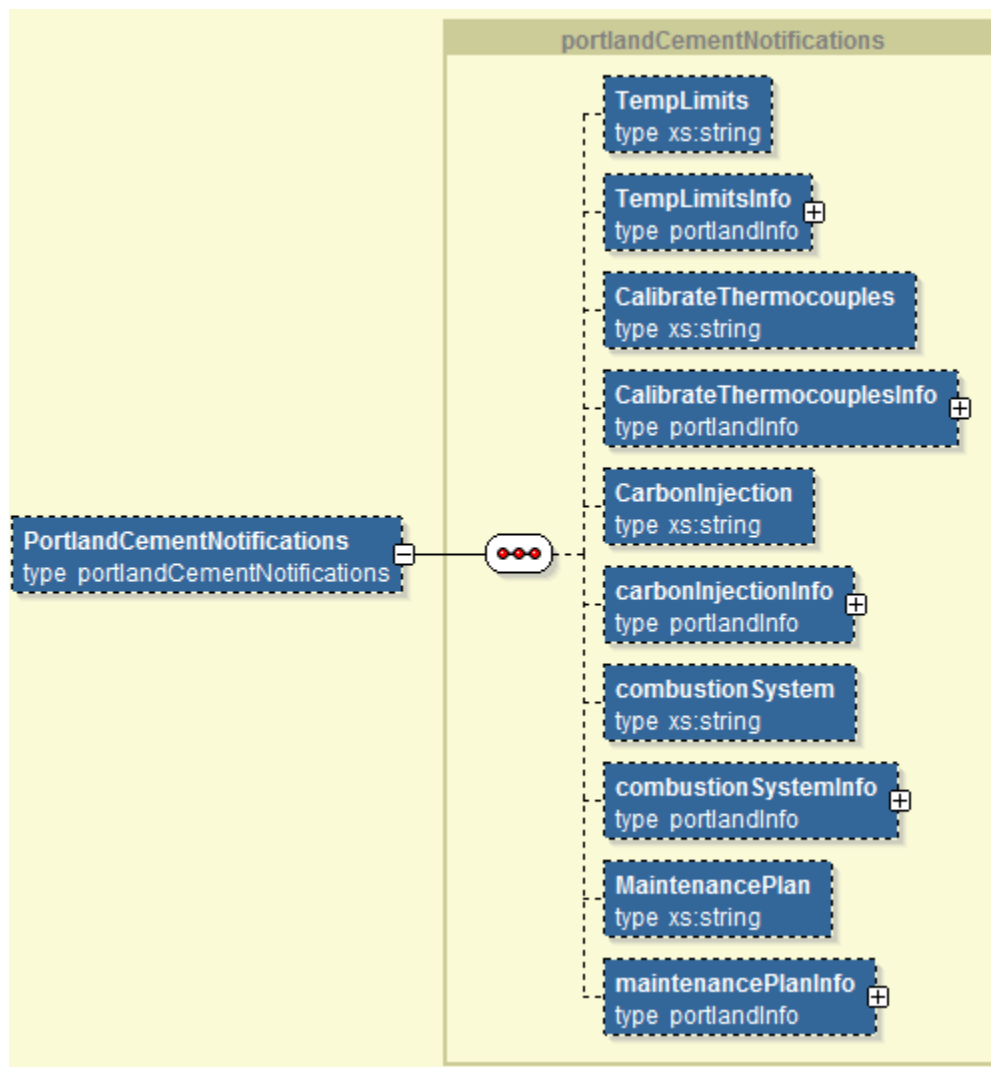
## 2.18 Portland Cement Notifications

### Portland Cement Notifications

**Element Name:** *PortlandCementNotifications*

**Element Description:** The containing element for Portland Cement information.

**Exhibit 2-20 Portland Cement Notifications XML Element**



### Temp Limits

**Element Name:** *TempLimits*

**Element Description:** Whether or not there were any exceedances of maximum control device inlet gas temperature limits specified in §63.1346(a) and (b).

## **Calibrate Thermocouples**

**Element Name:** *CalibrateThermocouples*

**Element Description:** Whether or not there were any failures to calibrate thermocouples and other temperature sensors as required under §63.1350(g)(1)(iii).

## **Carbon Injection**

**Element Name:** *CarbonInjection*

**Element Description:** Whether or not there were any failures to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rates or pressure drops, as applicable, as required under §63.1346(c)(2).

## **Combustion System**

**Element Name:** *CombustionSystem*

**Element Description:** Whether or not there were any failures to conduct any combustion system component inspections conducted within the reporting period as required under §63.1347(a)(3).

## **Maintenance Plan**

**Element Name:** *MaintenancePlan*

**Element Description:** Whether or not there were any failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1347(a).

## **Portland Cement Notifications Complex Child Elements**

- Temp Limits Info
- Calibrate Thermocouples Info
- Carbon Injection Info
- Combustion System Info
- Maintenance Plan Info

### **2.19 Temp Limits Info**

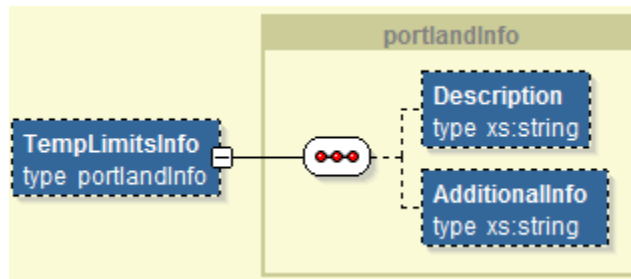
---

#### **Temp Limits Info**

**Element Name:** *TempLimitsInfo*

**Element Description:** Containing element for addition information for the ‘Temp Limits’ element.

**Exhibit 2-21 Temp Limits Info XML Element**



## Description

**Element Name:** *Description*

**Element Description:** This is required if you answer ‘Yes’ to the ‘Temp Limits’ element. Explain all exceedances of maximum control device inlet.

## Additional Info

**Element Name:** *AdditionalInfo*

**Element Description:** This is optional if you answer ‘No’ to the ‘Temp Limits’ element. Please list any additional information you would like to provide.

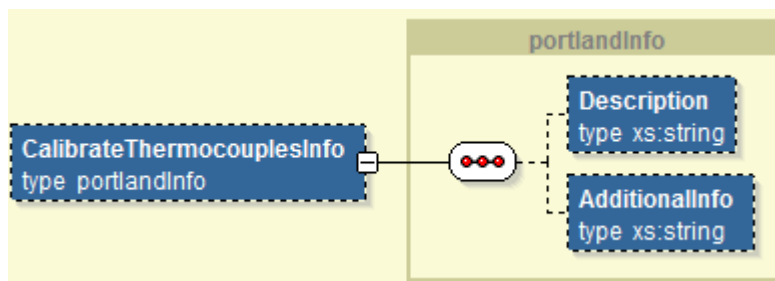
## 2.20 Calibrate Thermocouples Info

### Calibrate Thermocouples Info

**Element Name:** *CalibrateThermocouplesInfo*

**Element Description:** Containing element for additional information for the ‘Calibrate Thermocouples’ element.

**Exhibit 2-22 Calibrate Thermocouples Info XML Element**



## Description

**Element Name:** *Description*

**Element Description:** This is required if you answer ‘Yes’ to the ‘Calibrate Thermocouples’ element. Explain all failures to calibrate thermocouples and other temperature sensors.

## Additional Info

**Element Name:** *AdditionalInfo*

**Element Description:** This is optional if you answer ‘No’ to the ‘Calibrate Thermocouples’ element. Please list any additional information you would like to provide.

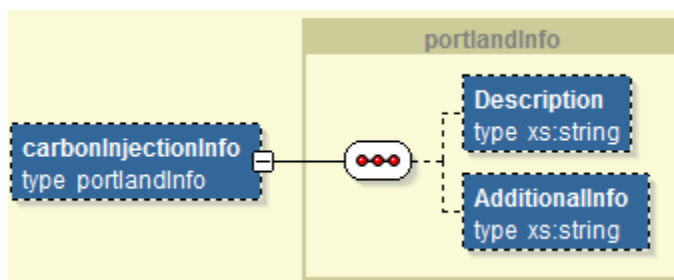
## 2.21 Carbon Injection Info

### Carbon Injection Info

**Element Name:** *carbonInjectionInfo*

**Element Description:** Containing element for additional information for the ‘Carbon Injection’ element.

**Exhibit 2-23 Carbon Injection Info XML Element**



## Description

**Element Name:** *Description*

**Element Description:** This is required if you answer ‘Yes’ to the ‘Carbon Injection’ element. Explain all failures to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rates or pressure drops.

## Additional Info

**Element Name:** *AdditionalInfo*

**Element Description:** This is optional if you answer ‘No’ to the ‘Carbon Injection’ element. Please list any additional information you would like to provide.

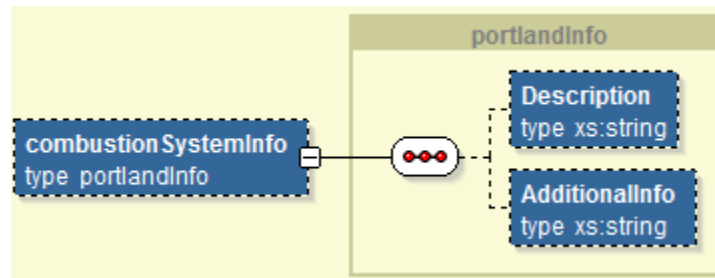
## 2.22 Combustion System Info

### Combustion System Info

**Element Name:** *combustionSystemInfo*

**Element Description:** Containing element for additional information for the ‘Combustion System’ element.

**Exhibit 2-24 Combustion System Info XML Element**



## Description

**Element Name:** *Description*

**Element Description:** This is required if you answer ‘Yes’ to the ‘Combustion System’ element. Explain all failures to conduct any combustion system component inspections conducted within the reporting period

## Additional Info

**Element Name:** *AdditionalInfo*

**Element Description:** This is optional if you answer ‘No’ to the ‘Combustion System’ element. Please list any additional information you would like to provide.

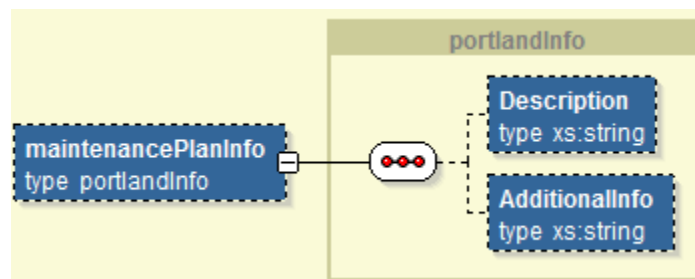
## 2.23 Maintenance Plan Info

### Maintenance Plan Info

**Element Name:** *maintenancePlanInfo*

**Element Description:** Containing element for additional information for the ‘Maintenance Plan’ element.

**Exhibit 2-25 Maintenance Plan Info XML Element**



## Description

**Element Name:** *Description*

---

**Element Description:** This is required if you answer ‘Yes’ to the ‘Maintenance Plan’ element. List any and all failures to comply with provisions of the operating and maintenance plan.

#### **Additional Info**

**Element Name:** *AdditionalInfo*

**Element Description:** This is optional if you answer ‘No’ to the ‘Maintenance Plan’ element. Please list any additional information you would like to provide.

---

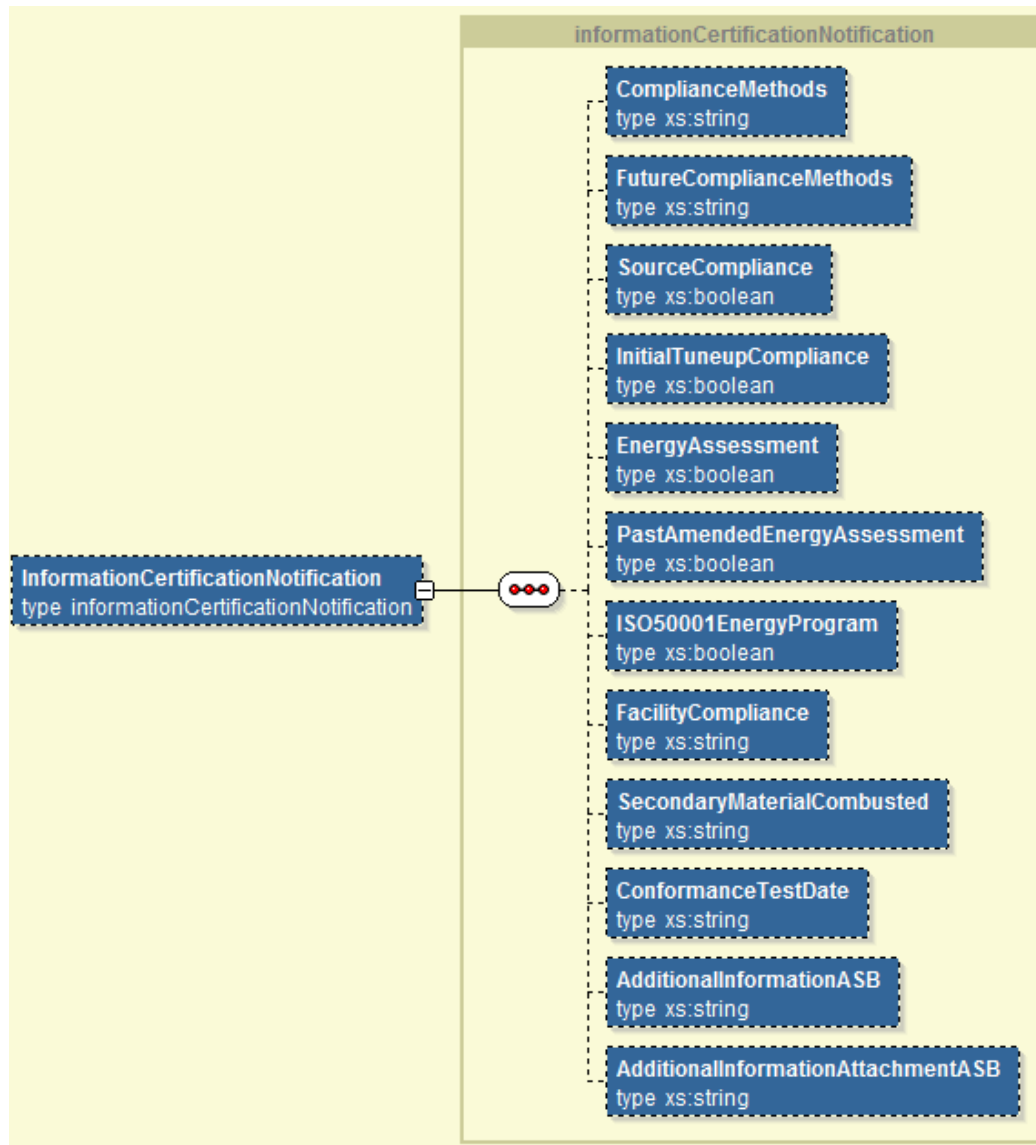
## 2.24 Information Certification Notification

### **Information Certification Notification**

**Element Name:** *InformationCertificationNotification*

**Element Description:** Containing element for information regarding Certification Notifications.

**Exhibit 2-26 Information Certification Notification XML Element**



### Compliance Methods

**Element Name:** *ComplianceMethods*

**Element Description:** The methods that were used to determine compliance.

### Future Compliance Methods

**Element Name:** *FutureComplianceMethods*

**Element Description:** The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods.

### Source Compliance

**Element Name:** *SourceCompliance*

---

**Element Description:** Whether or not the source complied with the relevant standard or other requirements.

### **Initial Tune up Compliance**

**Element Name:** *InitialTuneupCompliance*

**Element Description:** Whether or not this facility complies with the requirements in §63.11214 to conduct an initial tune-up of the boiler.

### **Energy Assessment**

**Element Name:** *EnergyAssessment*

**Element Description:** Whether or not the facility has had an energy assessment performed according to §63.11214(c).

### **Past Amended Energy Assessment**

**Element Name:** *PastAmendedEnergyAssessment*

**Element Description:** This element is required if you answered ‘Yes’ to the ‘Energy Assessment’ element. Whether or not a past or amended energy assessment has been performed on or after January 1, 2008 and by March 21, 2014 to meet the energy assessment requirements in §63.11214(c).

### **ISO 50001 Energy Program**

**Element Name:** *ISO50001EnergyProgram*

**Element Description:** This element is required if you answered ‘Yes’ to the ‘Energy Assessment’ element. Whether or not your facility operates under an energy program compatible with ISO 50001 that includes the affected units to meet the energy assessment requirements of §63.11214(c).

### **Facility Compliance**

**Element Name:** *FacilityCompliance*

**Element Description:** Whether or not the facility complies with the requirements in §63.11224(f).

### **Secondary Material Combusted**

**Element Name:** *SecondaryMaterialCombusted*

**Element Description:** Whether or not no secondary materials that are solid waste were combusted in any affected unit.

### **Conformance Test Date**

**Element Name:** *ConformanceTestDate*

---

***Element Description:*** Date of the test showing conformance with the emission standard and operating limits of the subpart (if applicable).

**Additional Information ASB**

***Element Name:*** *AdditionalInformationASB*

***Element Description:*** Any additional information you wish to include in the report.

**Additional Information Attachment ASB**

***Element Name:*** *AdditionalInformationAttachmentASB*

***Element Description:*** Attachment of additional information for the report. Must be a PDF.

---

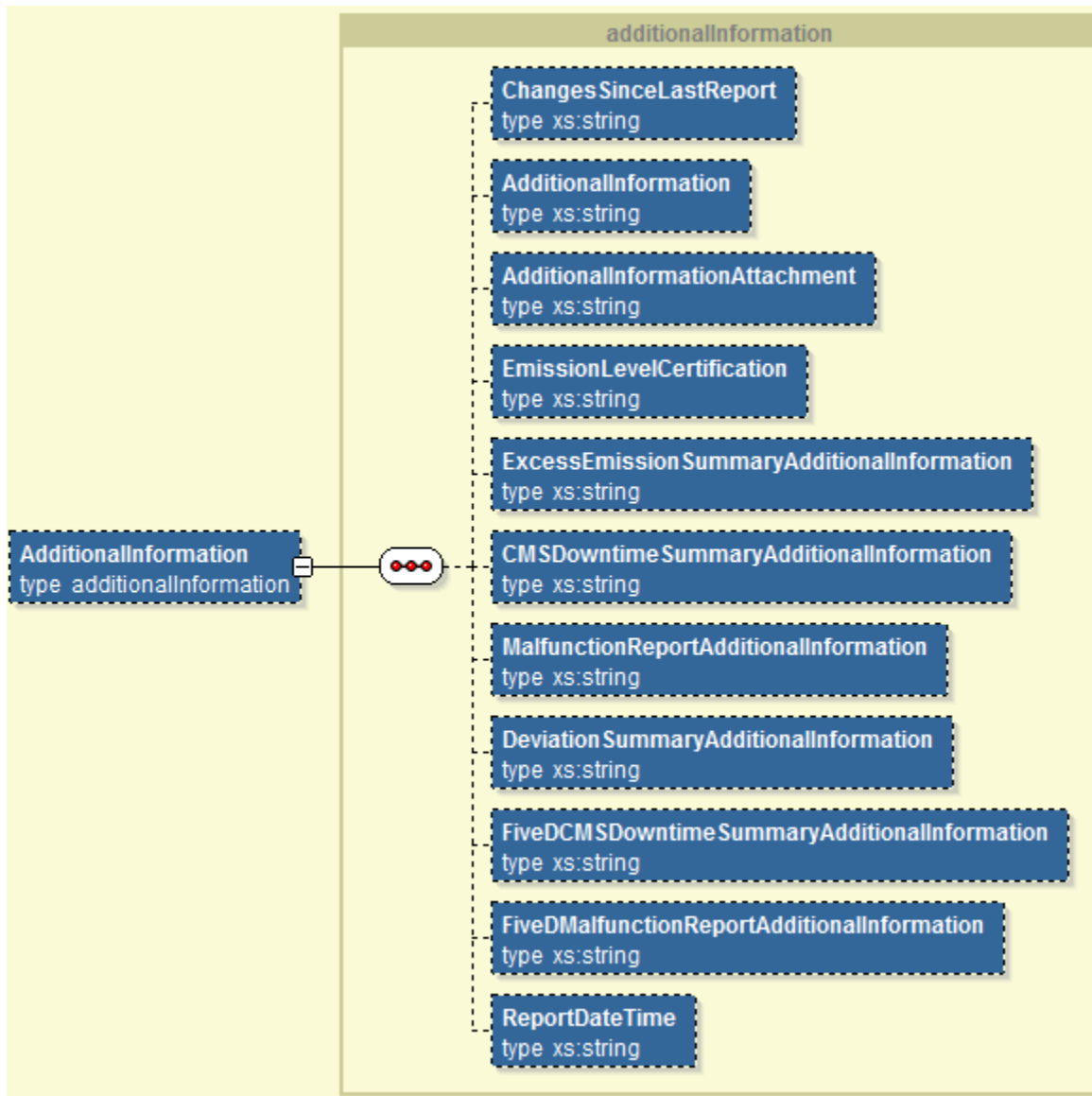
2.25 Additional Information

**Additional Information**

***Element Name:*** *AdditionalInformation*

***Element Description:*** Containing element for Additional information for most AER forms.

## Exhibit 2-27 Additional Information XML Element



### Change Since Last Report

**Element Name:** *ChangeSinceLastReport*

**Element Description:** Details on the changes since the last quarter in the CMS, process, or controls.

### Additional Information

**Element Name:** *AdditionalInformation*

**Element Description:** Describe any additional information to be included in the AER form.

### Additional Information Attachment

---

**Element Name:** *AdditionalInformationAttachment*

**Element Description:** Attachments to give further details about applicable additional information. Must be a PDF.

### **Emission Level Certification**

**Element Name:** *EmissionLevelCertification*

**Element Description:** Whether or not your facility demonstrates compliance by emission averaging, certify that the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in § 63.7545(e)(5)(i).

### **Excess Emission Summary Additional Information**

**Element Name:** *ExcessEmissionSummaryAddtionalInformation*

**Element Description:** Additional information for the excess emission summary if you answered 'No' to the 'Excess Emissions Summary' element.

### **CMS Downtime Summary Additional Information**

**Element Name:** *CMSDowntimeSummaryAddtionalInformation*

**Element Description:** Additional information for the CMS downtime summary if you answered 'No' to the 'CMS Downtime Summary' element.

### **Malfunction Report Additional Information**

**Element Name:** *MalfunctionReportAddtionalInformation*

**Element Description:** Additional information for the malfunction report if you answered 'No' to the 'Malfunction Report' element.

### **Deviation Summary Additional Information**

**Element Name:** *DeviationSummaryAddtionalInformation*

**Element Description:** Additional information for the deviation summary if you answered 'No' to the 'Deviation Summary' element.

### **Five D CMS Downtime Summary Additional Information**

**Element Name:** *FiveDCMSDowntimeSummaryAddtionalInformation*

**Element Description:** Additional information for the CMS downtime summary if you answered 'No' to the 'Five D CMS Downtime Summary' element.

### **Five D Malfunction Report Additional Information**

**Element Name:** *FiveDMalfunctionReportAddtionalInformation*

**Element Description:** Addition information for the malfunction report if you answered ‘No’ to the ‘Five D Malfunction Report’ question.

## Report Date Time

**Element Name:** *ReportDateTime*

**Element Description:** This field will be auto-populated, upon form creation. It should not be included in an XML upload.

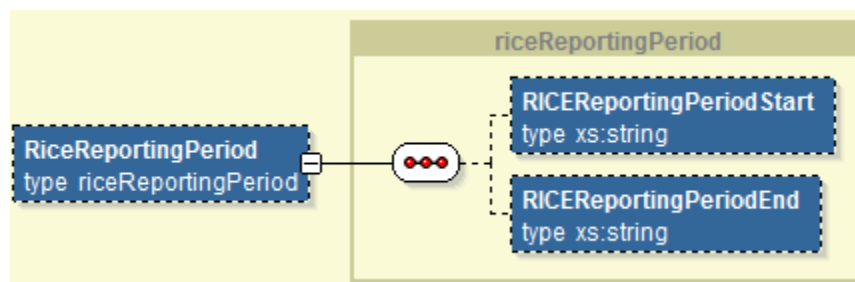
## 2.26 Rice Reporting Period

### Rice Reporting Period

**Element Name:** *RiceReportingPeriod*

**Element Description:** Containing element for information about the RICE reporting period.

**Exhibit 2-28 Rice Reporting Period XML Element**



### Rice Reporting Period Start

**Element Name:** *RiceReportingPeriodStart*

**Element Description:** Start date of RICE reporting period.

### Rice Reporting Period End

**Element Name:** *RiceReportingPeriodEnd*

**Element Description:** End date of RICE reporting period.

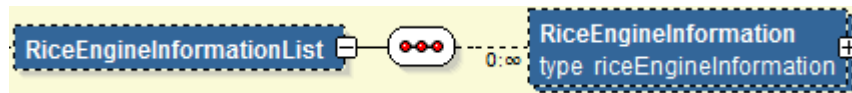
## 2.27 Rice Engine Information List

### Rice Engine Information List

**Element Name:** *RiceEngineInformationList*

**Element Description:** Containing element for the RICE Engine Information elements.

## Exhibit 2-29 Rice Engine Information List XML Element



### Rice Engine Information List Complex Child Elements

- Rice Engine Information

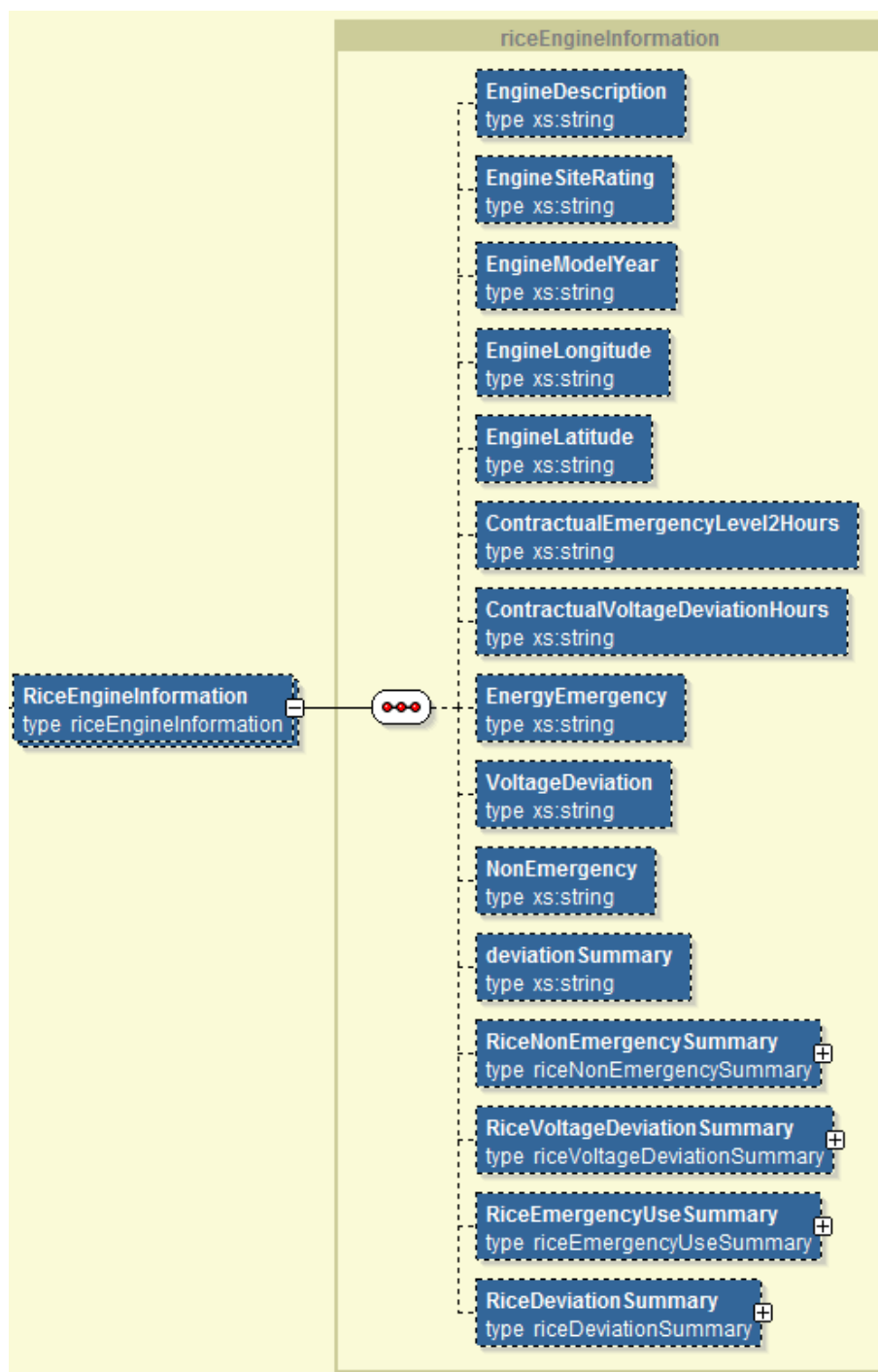
## 2.28 Rice Engine Information

### Rice Engine Information

**Element Name:** *RiceEngineInformation*

**Element Description:** Containing element for information regarding RICE engines. This element is repeatable.

Exhibit 2-30 Rice Engine Information XML Element



## Engine Description

**Element Name:** *EngineDescription*

**Element Description:** Description of the applicable engine.

**Engine Site Rating**

**Element Name:** *EngineSiteRating*

**Element Description:** The manufacture's nameplate brake horsepower rating.

**Engine Model Year**

**Element Name:** *EngineModelYear*

**Element Description:** Model year of the applicable engine.

**Engine Longitude**

**Element Name:** *EngineLongitude*

**Element Description:** Longitude of the engine. The value must be at least five decimal places in precision.

**Engine Latitude**

**Element Name:** *EngineLatitude*

**Element Description:** Latitude of the engine. The value must be a least five decimal places in precision.

**Contractual Emergency Level 2 Hours**

**Element Name:** *ContractualEmergencyLevel2Hours*

**Element Description:** Hours the engine is contractually obligated to be available for the purpose specified in §63.6640(f)(2)(ii)

**Contractual Voltage Deviation Hours**

**Element Name:** *ContractualVoltageDeviationHours*

**Element Description:** Hours the engine is contractually obligated to be available for the purpose specified in §63.6640(f)(2)(iii)

**Non-Emergency**

**Element Name:** *NonEmergency*

**Element Description:** Whether or not the engine was used for the purpose specified in §63.6640(f)(4)(ii): 50 hours per year for non-emergency situations.

**Voltage Deviation**

**Element Name:** *VoltageDeviation*

**Element Description:** Whether or not the engine was used for the purpose specified in §63.6440(f)(2)(iii): Voltage deviation or frequency of 5% or greater below standard voltage or frequency.

## Energy Emergency

**Element Name:** *EnergyEmergency*

**Element Description:** Whether or not the engine was used for the purpose specified in §63.6640(f)(2)(ii): Energy Emergency Level 2.

## Deviation Summary

**Element Name:** *deviationSummary*

**Element Description:** Whether or not there were deviations from the fuel requirements in §63.6604.

## Rice Engine Information Complex Child Elements

- Rice Non-Emergency Summary
- Rice Voltage Deviation Summary
- Rice Emergency Use Summary
- Rice Deviation Summary

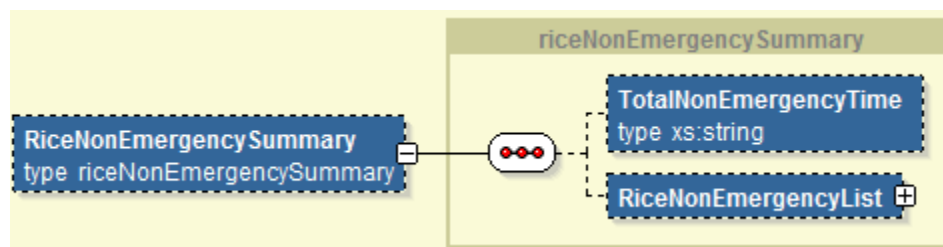
## 2.29 Rice Non-Emergency Summary

### Rice Non-Emergency Summary

**Element Name:** *RiceNonEmergencySummary*

**Element Description:** Containing element for RICE Non-Emergency Summary information.

**Exhibit 2-31 Rice Non-Emergency Summary XML Element**



### Total Non-Emergency Time

**Element Name:** *TotalNonEmergencyTime*

**Element Description:** Total time that the engine was used for the purpose specified in §63.6640(f)(4)(ii): 50 hours per year for non-emergency situations. This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

## Rice Non-Emergency Summary Complex Child Elements

- Rice Non-Emergency List

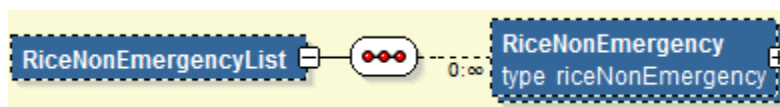
### 2.30 Rice Non-Emergency List

#### Rice Non-Emergency List

**Element Name:** *RiceNonEmergencyList*

**Element Description:** Containing element for the occurrences the engine was used for the purpose specified in §63.6640(f)(4)(ii): 50 hours per year for non-emergency situations.

Exhibit 2-32 Rice Non-Emergency List XML Element



## Rice Non-Emergency List Complex Child Elements

- Rice Non-Emergency

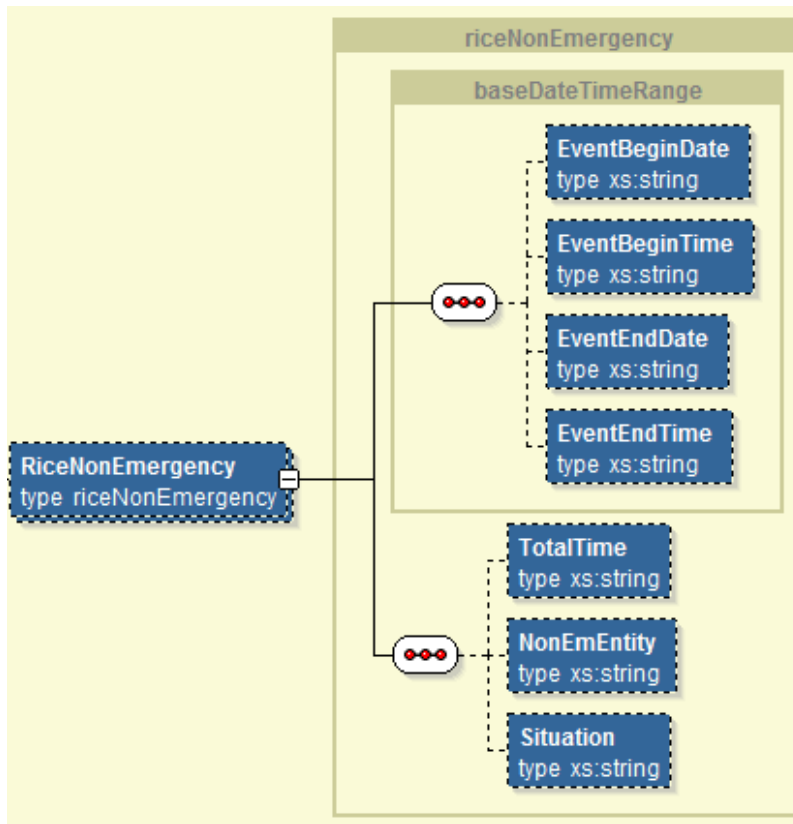
### 2.31 Rice Non-Emergency

#### Rice Non-Emergency

**Element Name:** *RiceNonEmergency*

**Element Description:** Containing element for information regarding the occurrences the engine was used for the purpose specified in §63.6640(f)(4)(ii): 50 hours per year for non-emergency situations. This element is repeatable.

**Exhibit 2-33 Rice Non-Emergency XML Element**



### Event Begin Date

**Element Name:** *EventBeginDate*

**Element Description:** The beginning date for this occurrence of the engine being used for the purpose specified in §63.6640(f)(4)(ii): 50 hours per year for non-emergency situations.

### Event Begin Time

**Element Name:** *EventBeginTime*

**Element Description:** The beginning time for this occurrence of the engine being used for the purpose specified in §63.6640(f)(4)(ii): 50 hours per year for non-emergency situations.

### Event End Date

**Element Name:** *EventEndDate*

**Element Description:** The ending date for this occurrence of the engine being used for the purpose specified in §63.6640(f)(4)(ii): 50 hours per year for non-emergency situations.

### Event End Time

**Element Name:** *EventEndTime*

**Element Description:** The ending time for this occurrence of the engine being used for the purpose specified in §63.6640(f)(4)(ii): 50 hours per year for non-emergency situations.

## Total Time

**Element Name:** *TotalTime*

**Element Description:** The total elapsed time (in hours) for this occurrence of the engine being used for the purpose specified in §63.6640(f)(4)(ii): 50 hours per year for non-emergency situations.

## Non Em Entity

**Element Name:** *NonEmEntity*

**Element Description:** The entity who dispatched the engine to be used for the purpose specified in §63.6640(f)(4)(ii): 50 hours per year for non-emergency situations.

## Situation

**Element Name:** *Situation*

**Element Description:** The situation that necessitated the dispatch of the engine for the purpose specified in §63.6640(f)(4)(ii): 50 hours per year for non-emergency situations.

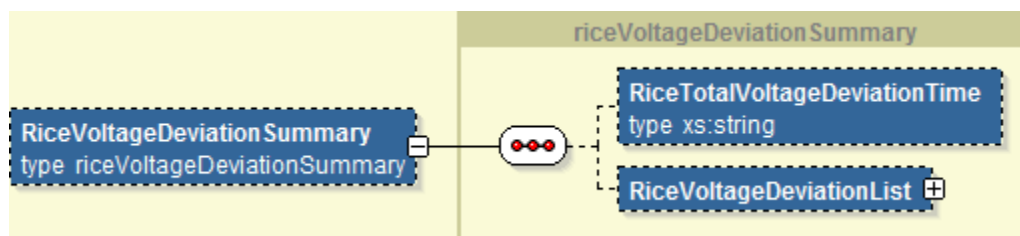
## 2.32 Rice Voltage Deviation Summary

### Rice Voltage Deviation Summary

**Element Name:** *RiceVoltageDeviationSummary*

**Element Description:** Containing element for RICE Voltage Deviation Summary information.

**Exhibit 2-34 Rice Voltage Deviation Summary XML Element**



### Rice Total Voltage Deviation Time

**Element Name:** *RiceTotalVoltageDeviationTime*

**Element Description:** Total time that the engine was used for the purpose specified in §63.6640(f)(2)(iii). This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload. This element is repeatable.

## Rice Voltage Deviation Summary Complex Child Elements

- Rice Voltage Deviation List

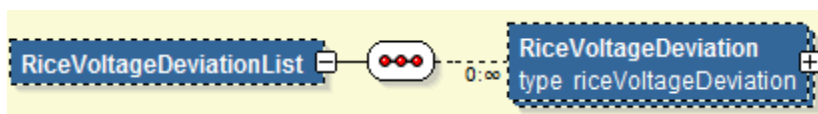
### 2.33 Rice Voltage Deviation List

#### Rice Voltage Deviation List

**Element Name:** *RiceVoltageDeviationList*

**Element Description:** Containing element for the occurrences the engine was used for the purpose specified in §63.6640(f)(2)(iii).

Exhibit 2-35 Rice Voltage Deviation List XML Element



#### Rice Voltage Deviation List Complex Child Elements

- Rice Voltage Deviation

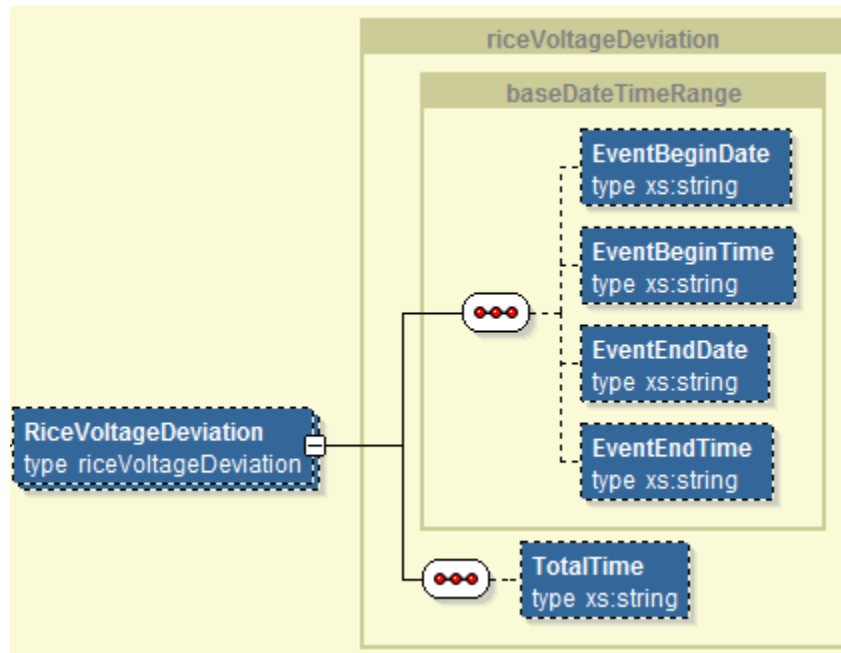
### 2.34 Rice Voltage Deviation

#### Rice Voltage Deviation

**Element Name:** *RiceVoltageDeviation*

**Element Description:** Containing element for information regarding the occurrences the engine was used for the purpose specified in §63.6640(f)(2)(iii). This element is repeatable.

**Exhibit 2-36 Rice Voltage Deviation XML Element**



### Event Begin Date

**Element Name:** *EventBeginDate*

**Element Description:** The beginning date for this occurrence of the engine being used for the purpose specified in §63.6640(f)(2)(iii).

### Event Begin Time

**Element Name:** *EventBeginTime*

**Element Description:** The beginning time for this occurrence of the engine being used for the purpose specified in §63.6640(f)(2)(iii).

### Event End Date

**Element Name:** *EventEndDate*

**Element Description:** The ending date for this occurrence of the engine being used for the purpose specified in §63.6640(f)(2)(iii).

### Event End Time

**Element Name:** *EventEndTime*

**Element Description:** The ending time for this occurrence of the engine being used for the purpose specified in §63.6640(f)(2)(iii).

## Total Time

**Element Name:** *TotalTime*

**Element Description:** The total elapsed time (in hours) for this occurrence of the engine being used for the purpose specified in §63.6640(f)(2)(iii).

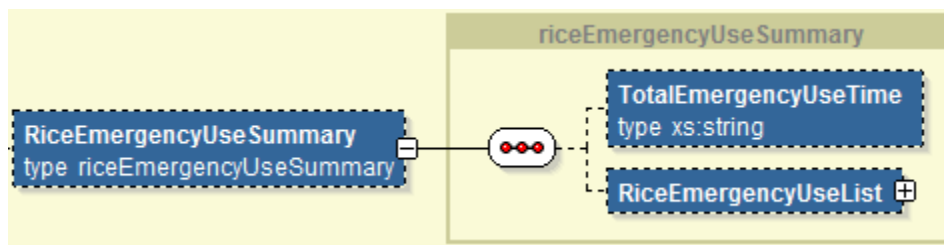
## 2.35 Rice Emergency Use Summary

### Rice Emergency Use Summary

**Element Name:** *RiceEmergencyUseSummary*

**Element Description:** Containing element for RICE Emergency Use Summary information.

**Exhibit 2-37 Rice Emergency Use Summary XML Element**



### Total Emergency Use Time

**Element Name:** *TotalEmergencyUseTime*

**Element Description:** Total time that the engine was used for the purpose specified in §63.6640(f)(2)(ii): Energy Emergency Level 2. This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

### Rice Emergency Use Summary Complex Child Elements

- Rice Emergency Use List

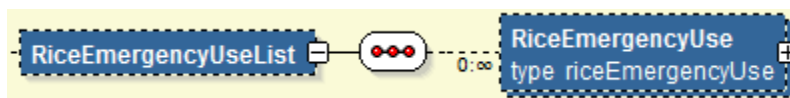
## 2.36 Rice Emergency Use List

### Rice Emergency Use List

**Element Name:** *RiceEmergencyUseList*

**Element Description:** Containing element for occurrences the engine was used for the purpose specified in §63.6640(f)(2)(ii): Energy Emergency Level 2.

**Exhibit 2-38 Rice Emergency Use List XML Element**



## Rice Emergency Use List Complex Child Elements

- Rice Emergency Use

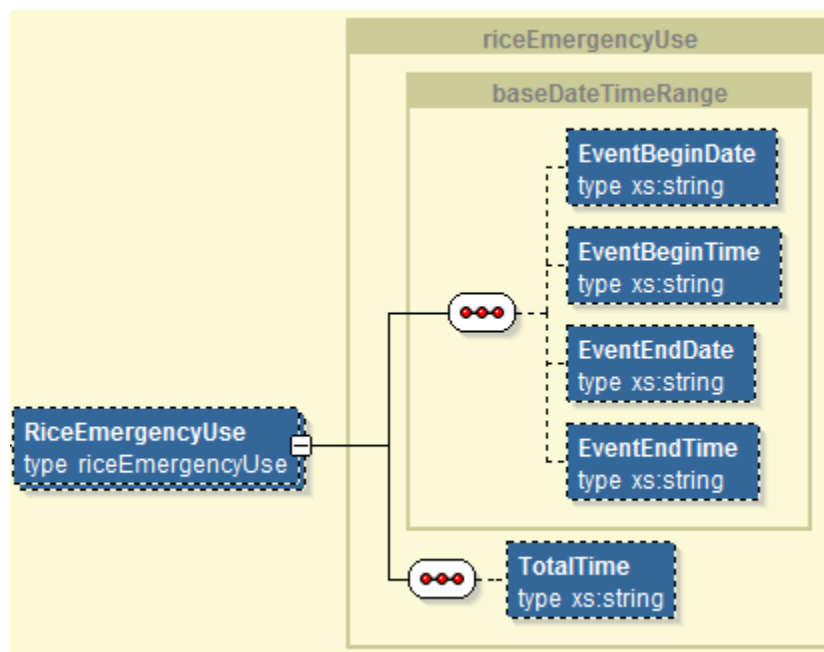
## 2.37 Rice Emergency Use

### Rice Emergency Use

**Element Name:** *RiceEmergencyUse*

**Element Description:** Containing element for information regarding occurrences the engine was used for the purpose specified in §63.6640(f)(2)(ii): Energy Emergency Level 2. This element is repeatable.

**Exhibit 2-39 Rice Emergency Use XML Element**



### Event Begin Date

**Element Name:** *EventBeginDate*

**Element Description:** The beginning date for this occurrence of the engine being used for the purpose specified in §63.6640(f)(2)(ii): Energy Emergency Level 2.

## Event Begin Time

**Element Name:** *EventBeginTime*

**Element Description:** The beginning time for this occurrence of the engine being used for the purpose specified in §63.6640(f)(2)(ii): Energy Emergency Level 2.

## Event End Date

**Element Name:** *EventEndDate*

**Element Description:** The ending date for this occurrence of the engine being used for the purpose specified in §63.6640(f)(2)(ii): Energy Emergency Level 2.

## Event End Time

**Element Name:** *EventEndTime*

**Element Description:** The ending time for this occurrence of the engine being used for the purpose specified in §63.6640(f)(2)(ii): Energy Emergency Level 2.

## Total Time

**Element Name:** *TotalTime*

**Element Description:** The total elapsed time (in hours) for this occurrence of the engine being used for the purpose specified in §63.6640(f)(2)(ii): Energy Emergency Level 2.

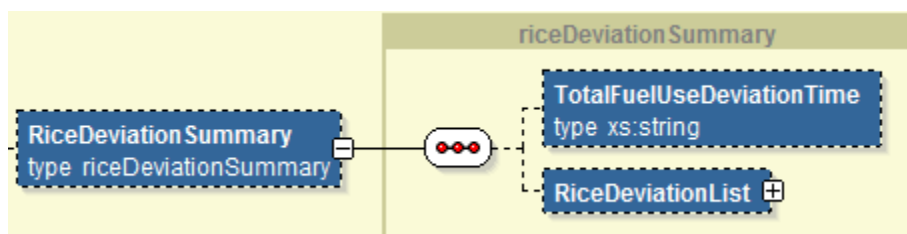
## 2.38 Rice Deviation Summary

### Rice Deviation Summary

**Element Name:** *RiceDeviationSummary*

**Element Description:** Containing element for RICE Deviation Summary information.

**Exhibit 2-40 Rice Deviation Summary XML Element**



## Total Fuel Use Deviation Time

**Element Name:** *TotalFuelUseDeviationTime*

**Element Description:** Total time that the engine deviated from fuel use requirements in §63.6604. This field will be auto-populated, if needed, upon form creation. It does not need to be included in an XML upload.

## Rice Deviation Summary Complex Child Elements

- Rice Deviation List

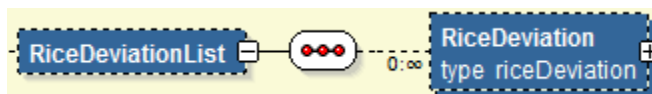
### 2.39 Rice Deviation List

#### Rice Deviation List

**Element Name:** *RiceDeviationList*

**Element Description:** Containing element for occurrences of deviations from fuel use requirements in §63.6604.

Exhibit 2-41 Rice Deviation List XML Element



#### Rice Deviation List Complex Child Elements

- Rice Deviation

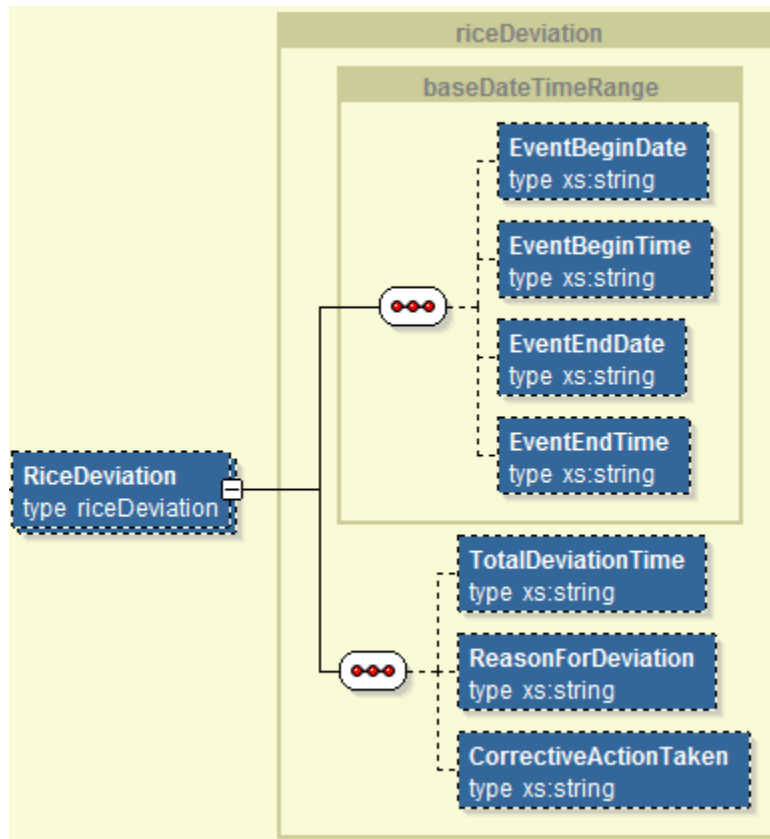
### 2.40 Rice Deviation

#### Rice Deviation

**Element Name:** *RiceDeviation*

**Element Description:** Containing element for information regarding occurrences of deviations from fuel use requirements in §63.6604. This element is repeatable.

**Exhibit 2-42 Rice Deviation XML Element**



### Event Begin Date

**Element Name:** *EventBeginDate*

**Element Description:** The beginning date for this occurrence of a deviation from the fuel requirements in §63.6604.

### Event Begin Time

**Element Name:** *EventBeginTime*

**Element Description:** The beginning time for this occurrence of a deviation from the fuel requirements in §63.6604.

### Event End Date

**Element Name:** *EventEndDate*

**Element Description:** The ending date for this occurrence a deviation from the fuel requirements in §63.6604.

### Event End Time

**Element Name:** *EventEndTime*

---

***Element Description:*** The ending time for this occurrence of a deviation from the fuel requirements in §63.6604.

### **Total Deviation Time**

***Element Name:*** *TotalDeviationTime*

***Element Description:*** The total elapsed time (in hours) of this occurrence of deviation from the fuel requirements in §63.6604.

### **Reason For Deviation**

***Element Name:*** *ReasonForDeviation*

***Element Description:*** The reason for this occurrence of deviation from the fuel requirements in §63.6604.

### **Corrective Action Taken**

***Element Name:*** *CorrectiveActionTaken*

***Element Description:*** Action taken to correct this occurrence of deviation from the fuel requirements in §63.6604.

### 3 Appendix A: Terms and Acronyms

Term / Acronym	Definition
AER	Air Emissions Report
CDX	Central Data Exchange
CEDRI	Compliance and Emissions Data Reporting Interface
Complex Element	An element that contains other elements.
EPA	Environmental Protection Agency
OAR	Office of Air and Radiation
RICE	Reciprocating Internal Combustion Engine
XML	EXtensible Markup Language
XSD	XML Schema Definition